Installation Manual

FORPARK AUSTRALIA

HELPING YOUNG AUSTRALIANS GROW

2011

Congratulations on selecting Forpark Australia equipment for your playground.

This manual provides you with easy to follow instructions that will enable you to install the equipment correctly. Installing your own playground can be a simple and rewarding task and it is satisfying to be able to stand back when the job is finished and say "we did that!"

As a quality assured company our equipment complies with the following standards for play equipment as a minimum, to ensure the safety of your children.

- *AS 4685–2004, Parts 1 – 6, Playground equipment (Safety requirements and test methods)*
- *AS/NZS 4422:1996 Playground surfacing – Specifications, requirements and test method*
- *AS/NZS 4486.1.1997 Playgrounds and playground equipment – Part 1: Development, installation, inspection, maintenance and operation*

You may be interested to know that Forpark Australia is a family owned Australian company and that we are the largest in-house manufacturer of playground equipment in Australia.

We have been manufacturing playground equipment since 1979 and provide you with the benefit of the knowledge and experience that we have developed over these years.

This installation manual should be kept for future reference and to help you with your maintenance program. A recommended maintenance schedule is provided in the rear of this manual.

Good luck with your installation.

Darryl G. Hansen
Managing Director

Index

Preparation

Prepare the site

Prior to any installation you should be familiar with the requirements of AS 4685 (Parts 1-6) – 2004 "Playground equipment – safety requirements and test methods" (particularly relating to fall zone requirements), AS/NZS 4422:1996 "Playground surfacing – specifications, requirements and test method" (relating to the type and depth of your soft-fall surfacing), and AS/NZS 4486.1:1996 "Playgrounds and playground equipment – development, installation, maintenance and operation" (dealing with your site requirements and ongoing maintenance).

If you require advice, talk to one of our consultants. Some important things to remember are as follows:

1. Playground equipment is normally designed for installation on a flat level surface so you should ensure that your play area is prepared correctly.
2. Check that the site is clear of underground power and services before you commence digging.
3. Measure the site to ensure that it is large enough to allow for the correct fall zones between the equipment and the outside of the soft-fall surface, and for correct distances between various items of equipment. If you are unsure of these requirements you should check with your Forpark representative.
4. Where possible, prepare the site to allow for any slides to face south. While not essential, this will minimise the heat build up on the slide face during the hottest parts of the day.
5. For ease of installation, do not put the soft-fall surfacing in until after the equipment has been installed. Ensure that you allow for the required soft-fall depth when excavating the site. Any excavation should take place prior to commencing installation of the equipment.

Equipment required for installation

1. Ratchet (or socket set) with ½" driver
2. Ratchet (or socket set) with 3/8" driver
3. Cordless drill
4. Shovel for digging holes (preferably long handled)
5. If digging in hard ground you may need a 300mm auger and a crow bar
6. Spirit level
7. 'G' clamps (for holding items in place prior to bolting)
8. Stringline
9. Wheelbarrow
10. 'Vice-grip' pliers (for closing 'S' hooks)
11. An axe (for cutting tree roots if they are in the way)
12. Concrete for footings
13. Bricks/pavers (to provide stability below ground where required)
14. A basic first aid kit for emergencies
15. 'Occupational Health and Safety' plan and procedures if applicable

Check the contents of the crate

In addition to the equipment itself, you should have the following:-

1. Plans of the play structure
2. Materials or packing list
3. Tri-lobe driver (driver with a rounded triangular head which fits onto your ½" driver)
4. Hex head allen keys (where required)
5. Torx Driver (driver with a star shaped head which fits onto your 3/8" driver)
6. Tech Screw Driver
7. Nuts and bolts, etc
8. Touch up paint
9. Loctite

Securing the site while work is in progress

You should ensure that the work site is clearly defined by some sort of barrier or temporary fence to ensure that children or onlookers are not in danger of injury while you work. The concrete footings will need at least 24 hours to set so a barrier or fence will keep people off the equipment until it is ready to be used and until adequate soft-fall surfacing has been installed.

Preparation for installation

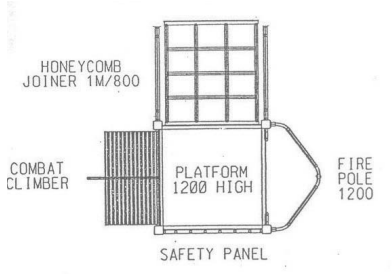
1. Before you commence installation you should familiarise yourself with the general instructions found on pages 3 to 7 of this manual. The various individual items of your equipment will be covered later in the manual.
2. Once ready to commence installation you should lay out the equipment and ensure that you have all items detailed on the materials or packing list.
3. Group the numbered uprights together, in order of their installation so that they are readily available as required (see "Reading Plans" below).
4. Lay the equipment out roughly on the ground to ensure that it fits within the prepared area and that all required fall zones are met.
5. Determine the proposed finished surface level and use a string line to set this level. This will help in ensuring that the platforms and other items are set at their correct height above ground level.

Reading the Plans

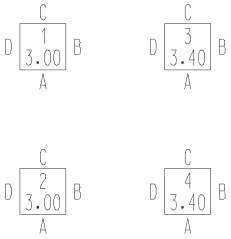
You have been supplied with two types of plans, one showing the actual layout of the equipment and the other showing the position of the uprights. (See below for examples of both plans.)

The upright plan contains a number of squares representing each upright and their locations corresponding with the uprights in the equipment layout plan. The figures inside each square represent the upright number and the height of that upright, e.g. upright 1 (below) is 3.0m in length. The letters on the outside of each square provide the orientation of each upright in relation to the items to be attached. The corresponding upright number is marked on the bottom of each upright supplied (along with some other details as shown below). The upright number is always marked on side 'B'. When standing at the base of the upright and holding it in a horizontal position with side 'B' facing up, you will rotate the upright counter-clockwise to bring side 'C' to the face up position and so forth.

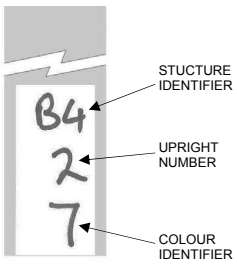
Equipment Layout Plan
(as though looking down from above)



Upright Plan (as though looking down on the uprights from above)



Upright Markings
(base of each upright, always on side 'B')



Installation – Platforms, Uprights and Fasteners

Installing Uprights & Platforms

Uprights are pre-drilled with holes corresponding to the components to be attached. Aluminium uprights have a threaded insert fitted to each hole. Where steel uprights are used many of the holes are 9mm in diameter and require "tap tight" tri-lobe bolts (self tappers) in place of the tri-lobe bolts specified in this manual.

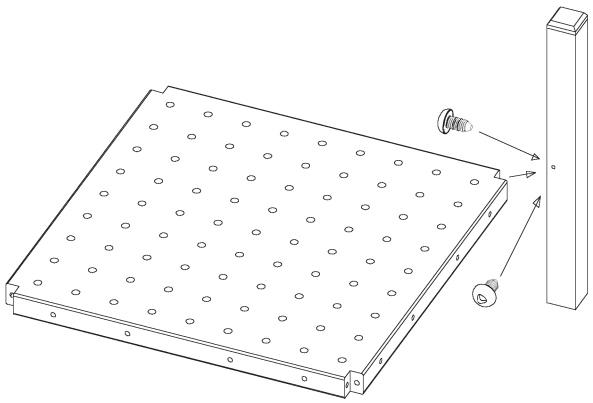
Each upright has a blue/grey upright cap inserted in the top and a black plastic 75mm x 75mm cap inserted in the base. If the base caps have not been inserted already they will be supplied loose and should be inserted into the bottom of each upright before installing.

Each platform is installed at the height shown on the equipment layout plan (when measured from the top of the platform to the finished surface level below) and attached using 20mm tri-lobe bolts on each corner. Most platform styles allow for two bolts per upright however some angled platforms will only allow for the use of one bolt. (Note: Tri-equi platforms have a different upright orientation on each corner so take care to ensure the upright orientation matches that on the plan.)

Uprights should normally be installed to a depth of 800mm below the finished surface level. (If rubber surfacing has been specified the uprights may have been cut to allow 600mm below finished surface level.) Make sure that you allow for the safety soft-fall surfacing when digging your holes, ie, if the upright needs to be buried 800mm below finished surface level, and you have already excavated 300mm for soft-fall, the holes only needs to be 500mm deep. (Note: If the ground is soft or likely to be subject to settling it is best to dig the holes an additional 100mm deep and lay a 100mm thick footing using rapid set concrete prior to inserting the uprights.)

Choose a platform as a starting point on the structure and prepare to install that platform. This could be in the centre of the structure to enable teams to work outwards in both directions at the same time. Before commencing the installation ensure that you have allowed for the correct fall zone between the equipment and the edge of the soft-fall surface.

To install the platform, place the uprights into the holes, ensuring that the identification numbers on the base of the uprights match the identification numbers on the upright plan. It may help to place a platform on the ground as a guide to enable you to work out the correct positioning of the upright holes. This initial platform will set the height for many of the other components to be subsequently attached, so it is important that its height in relation to the finished ground surface is correct.



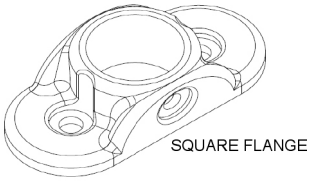
Once the uprights are in the holes at the correct height, lift the platform into place and fasten each corner to the upright by bolting from the underside of the platform into the upright using 20mm tri-lobes. Refer to the 'upright plan' to determine the correct orientation of each upright. It is important to make sure that the platform is level and at the correct height, and the uprights vertical.

Attach any panels (both over and under the platform) as described in the section of this manual titled "panels". This will provide additional stability before the concrete is poured and sets.

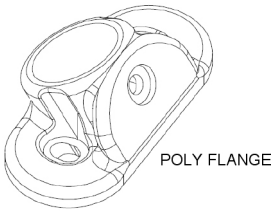
Once satisfied that the platform is level and the uprights vertical, concrete the uprights and fill the holes, packing the soil firmly.

Note: Occasionally, due to human error, some holes in the uprights may be missed. Should this happen you can drill the holes on site. (You may need to check with your Forpark office first if unsure of the exact hole location.) For aluminium uprights a 13.5mm hole should be drilled and a threaded insert fitted (a tool and some spare inserts should have been suppled with your bolt pack). If the uprights are steel a 9mm hole should be drilled. Self tapping ('tap-tight') tri-lobes will cut their own thread when inserted.

Flanges

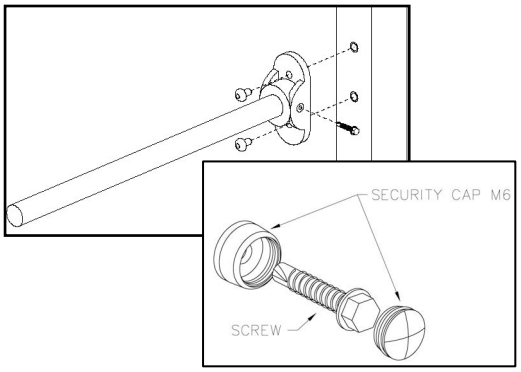


Many items connect to the uprights using moulded plastic flanges. These flanges will be included in the bolt packs. Square flanges are used on uprights that are square to the face of the platform. Poly flanges are used when the upright is connected to the platform at an angle.



In many cases it may be easier to loosely fit the flanges in place on the component then fasten the flanges to the upright. Each flange attaches to the upright using two 20mm tri-lobes (in some instances 25mm tri-lobes will be supplied and can be used).

Once satisfied that the uprights are correctly positioned and square, each flange can be secured to the component using a tech screw. A security cap should be used with each tech screw as shown, fitting the base to the screw before fastening. The tech screw is inserted through the dimpled hole in the side of the flange and into the steel pipe using a power drill and the tech screw driver supplied. Once secure, the top of the security cap should be securely fastened.



Before securing each item ensure that the spacing between uprights and platforms is correct as detailed below.

Determining Spacing between Uprights

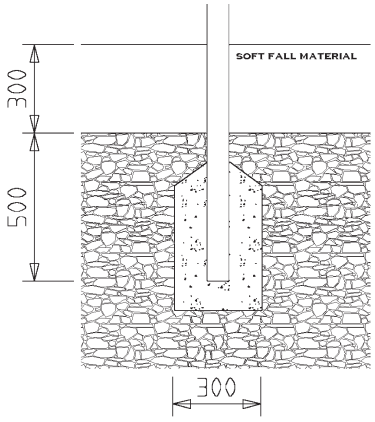
Where handrails are used to determine the distance between platforms, a tape measure should also be used to check distances, allowing for movement in the flanges if they are not yet secured. Alternatively, a platform (or platforms) laid on the ground could be used as spacers. The distances between most components will be a multiple of a single platform width. The horizontal distances between opposing upright faces and platforms are as follows: -

Item length	Distance between upright faces	Distance between platform faces
1 metre (or single platform)	870mm	945mm
2 metre	1815mm	1890mm
3 metre	2760mm	2835mm
4 metre	3705mm	3780mm

The only exceptions to this rule are inclined Creeping Crawlers and Pinnacle Climbers. In the case of these two items the item itself should be used as a guide when placed at the correct angle of inclination.

Concrete Footings

Concrete should be used on all items in the ground as per the diagram. The footings on uprights should be 300mm x 300mm x 400mm (deep). Attachment components will generally only go 600mm below finished surface level and a smaller footing will be sufficient (approx. 300mm x 300mm x 300mm). All footings should have a tapered top so that water won't pool around the upright. Where loose fill surfacing is used ensure that the concrete is at least 300mm below the finished surface level or that the footing is effectively covered by items of equipment in such a way that they do not present a hazard. (Note: If the ground is soft or likely to be subject to settling it is best to use an additional 100mm of concrete on the footing below the upright. This may need to set before placing the upright in place.)
Free standing items may require a larger footing as detailed individually.

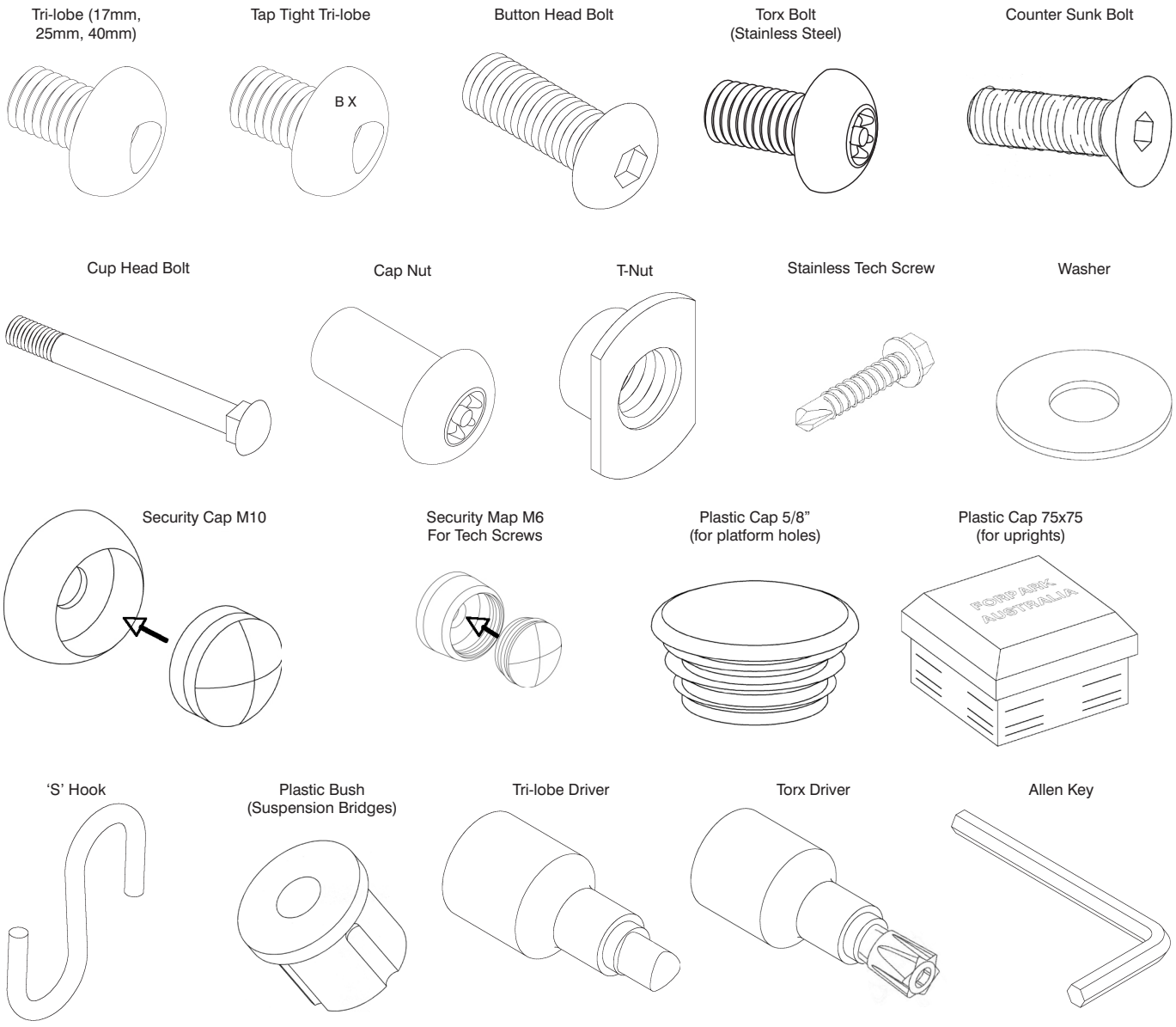


Fasteners

All holes in aluminium uprights require nutserts (threaded inserts fitted in the holes). In the case of steel uprights many of the holes will require 'tap tight' tri-lobe bolts (self-tappers) which fasten directly into the uprights. These 'tap-tight' tri-lobes are identified by the letters "BX" in small print on the head and by a slightly triangulated and concave end at the base of the thread. Regular tri-lobes are used when connecting to 'T' Nuts, Cap Nuts and nutserts.

In some instances tri-lobe bolts will be replaced with torx bolts. Both will do the same job. This will be particularly common where stainless steel fasteners are used.

The commonly used fasteners are shown below.

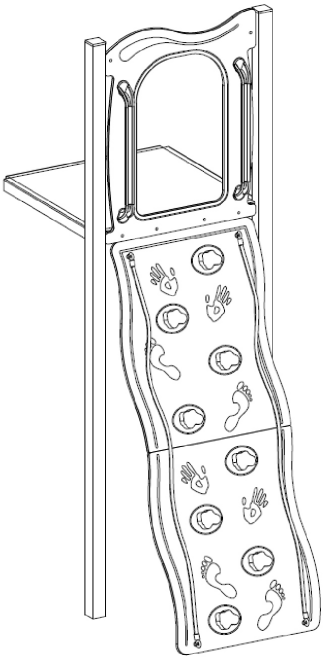


Loctite

'Loctite' is provided in each bolt pack. This should be used on any bolt used on items subject to movement or vibration. Where an item requires the use of 'loctite' it is specified in this manual. (Examples of items typically requiring this are the boards on bridges and rope connectors.)
Where 'loctite' is required only one to two drops need be applied to the thread of the bolt, immediately before inserting into the nut and tightening.

Installation – Playground Components

Abseil



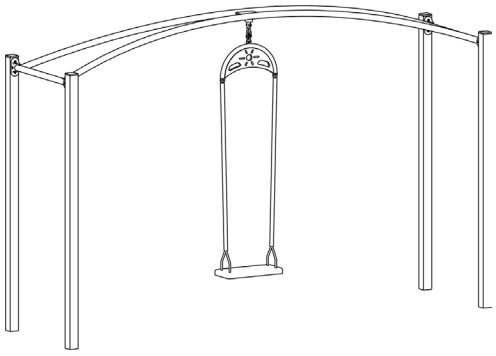
Use the abseil legs to locate the correct hole position and dig hole. Connect the bottom of the legs together with the tie bar (using 25mm tri-lobes), then position the legs in the hole with the top brackets resting against the platform, lining up the holes. Do not fasten yet as the panel needs to be placed over the top of the brackets before fastening.

Attach the handgrips to the panel using 35mm torx bolts through the handgrip with an M10 nut and security cap on the inside of the panel. Attach the top of the panel to the uprights using 'L' brackets. The 'L' bracket is fastened directly to the upright using 17mm tri-lobes and to the panel using 30mm cup head bolts, with the nut on the outside face of the panel enclosed in a security cap. The base of the panel is then fastened to the platform on the outside of the abseil leg brackets using 30mm cup head bolts, entering through the outside face of the panel, with an M10 nut enclosed in a security cap on the underside of the platform.

Attach the plastic climbing panels to the abseil legs using 25mm tri-lobes, entering through the front of the panels into the threaded holes in the legs. Before the bolts are inserted you should apply a small amount of 'loctite' to the thread. Attach the abseil ropes to both sides of the climbing panels using 25mm tri-lobes entering from underneath the panels.

Once all bolts have been tightened concrete the legs into the ground.

Air Surfer



Position the top bar on the ground with the first end level with the uprights it will connect to. Mark the spot for the next two uprights, dig the holes and insert the uprights to the correct height. Attach the flanges to the top bar (as detailed in "flanges" on page 6 of this manual). Lift the top bar into place and attach the flanges to the uprights using 20mm tri-lobes. Ensure that the bolts are tightened, the uprights vertical and the top bar level. After attaching any connecting platforms concrete the uprights into the ground. Once the concrete has set, connect the foot support and chains to the air surfer frame using 'S' Hooks (ensure that the 'S' hooks are fully closed using vice-grips with the small end of the 'S' Hook joining the chain.)

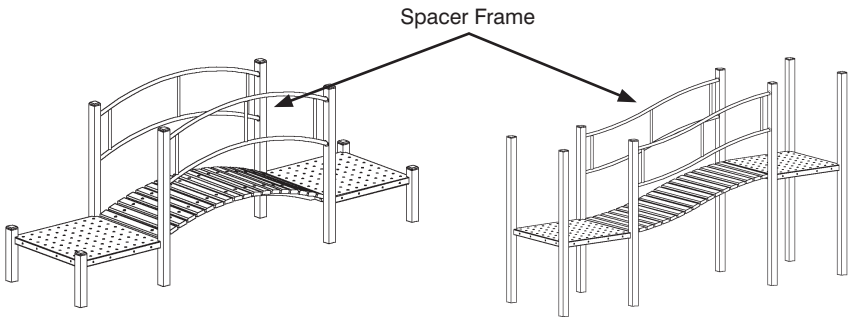
Arch and Wave Bridge

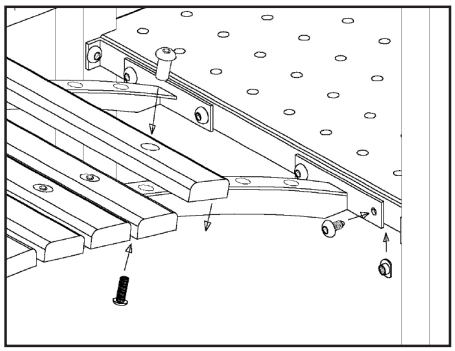
Using the spacer frames (or hand rail panels) as a guide to determine the distance from one platform to the next. Dig holes for the uprights at the opposite end of the spacer frames and insert them at the correct height. Fasten the spacer frames to the uprights using 17mm tri-lobes. Attach the platform and uprights at the opposite end. After ensuring that the platform and uprights are level and at the correct height concrete the footings in place.

Attach the bridge support beams to the platforms. Fasten to the platform using 17mm tri-lobes and T-nuts, but do not tighten bolts fully at this stage. The support beams for 1 metre and 2 metre bridges bolt straight onto the platforms. 3 metre bridges require a support bracket in place between the ends of the support beams and the

platform. This support bracket should be fitted first and bolted to the uprights at the sides using 20mm tri-lobes, and the support beams then attached onto the bracket.

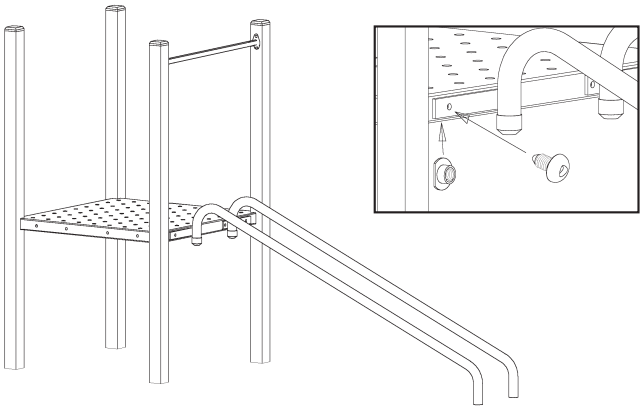
Once the support beams are in place attach the bridge boards to the top of the beams. The two boards with docked corners (in the case of timber) or the 2 shorter boards (in the case of aluminium) are positioned adjacent to the platforms. Timber boards are fastened using a cap nut through the top of the board and a 40mm tri-lobe through the underside of the support beam. Aluminium and plastic boards are fastened by a 40mm tri-lobe from the underside of the support beam. Before the bolts are inserted you should apply a small amount of 'loctite' to the thread. Make sure the boards are evenly spaced then tighten all bolts. Now tighten the bolts attaching the support beams to the platforms.





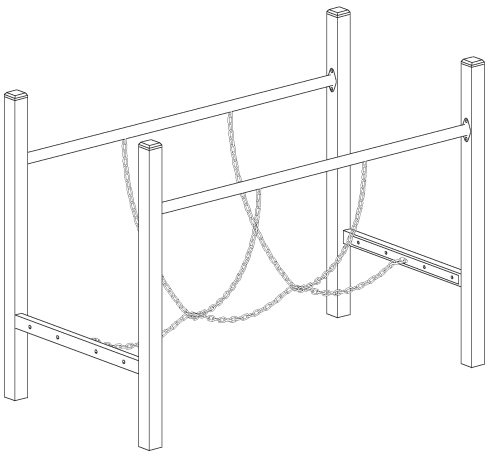
Banister Slide

The rails of the banister slide come in pairs. The rails are positioned so that the longest end of each flange attaches to the outside edge of the platform, causing the rails to be closer together. Use the banister slide to determine the location of the holes for the legs. Dig the holes and attach the top of the flanges of each rail to the platform using 17mm tri-lobes and T-nuts (the T-nut being on the underside of the platform). It is advisable to place a brick or a block of wood below each leg to provide additional stability. (Banister slides attaching to a 1600mm platform will have detachable legs which are fastened using a 'tap tight' tri-lobe.) Concrete the legs into the ground. Attach the handrail above the platform using 17mm tri-lobes.

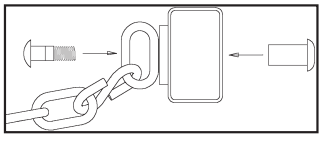


Burmese Bridge

Using the handrails as a guide to determine the distance between uprights, dig holes for the uprights at the end of the handrails. (For exact distances see "Determining Distances between Uprights" at the front of this manual.) After placing the uprights in the holes and ensuring that their depth is correct, attach the flanges to the handrails (as detailed in "flanges" on page 6 of this manual) and attach to the uprights using 20mm tri-lobes. After ensuring that the uprights are vertical concrete them into the ground.

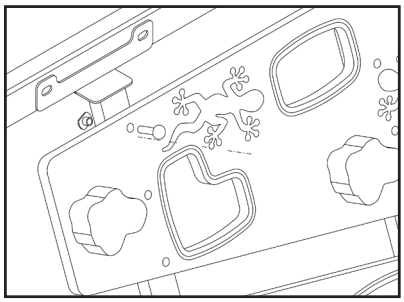


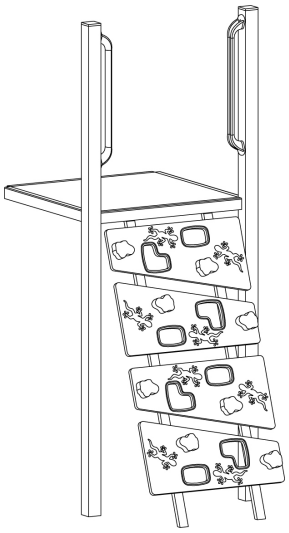
Attach each bracket to the platform using 17mm tri-lobes and T-nuts, or to the end frame joiner using stainless steel cap nuts and 30mm cup head bolts, applying a small amount of 'loctite' to the threads before tightening. Attach the chains to the brackets and rails using 8mm 'S' hooks. Ensure the 'S' hooks are fully closed using vice-grips. (The small end of the 'S' hook attaches to the chain and the large end connects to the lug on the rails.)



Cliff Climber

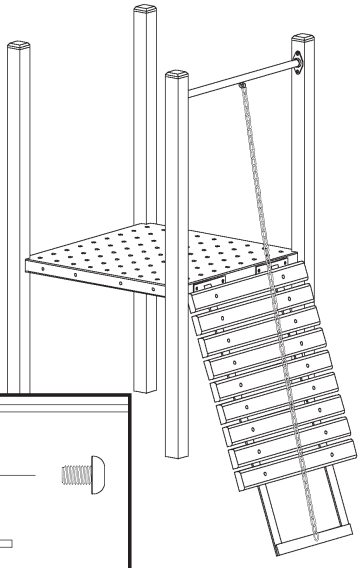
Use the frame to locate the correct position to dig holes and attach the frame to the platform using 17mm tri-lobes and T-nuts. Attach the boards to the frame using 40mm tri-lobes through the front of the boards and T-nuts on the underside of the frame. Before the bolts are inserted you should apply a small amount of 'loctite' to the thread. Attach the handgrips above the platform using 20mm tri-lobes. Once all bolts have been tightened concrete the legs into the ground.

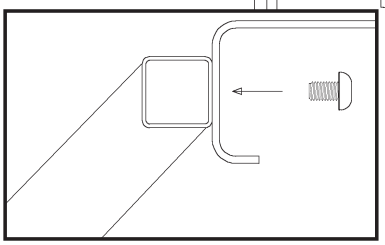




Combat Climber

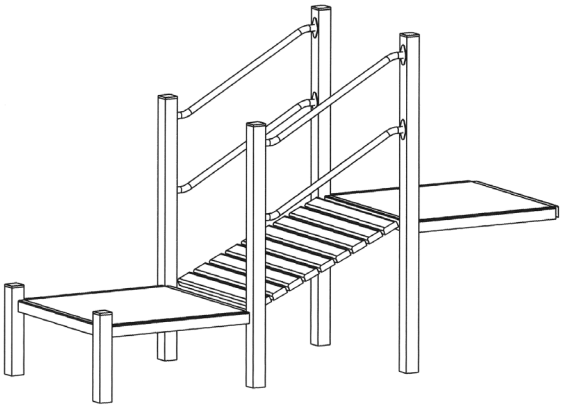
Use the frame to locate the correct position to dig holes and attach the frame to the platform using 17mm tri-lobes and T-nuts. Attach the boards to the frame. The board with docked corners (in the case of timber) or the shorter board (in the case of aluminium) is positioned adjacent to the platform. Timber boards are fastened using a cap nut through the top of the board and a 40mm tri-lobe through the underside of the frame. Aluminium boards are fastened by a 40mm tri-lobe from the underside of the support beam. Before the bolts are inserted you should apply a small amount of 'loctite' to the thread. Using 'S' hooks, attach one end of the chain to the base of the frame and the other end to the handrail. Ensure the 'S' hooks are closed fully using vice-grips. (The small end of the 'S' hook attaches to the chain and the large end connects to the lug on the rail.) Attach the flanges to the top rail (as detailed in "flanges" on page 6 of this manual) and attach to the uprights using 20mm tri-lobes. Once all bolts have been tightened concrete the legs into the ground.

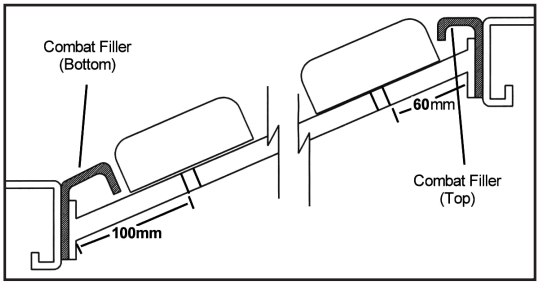




Combat Joiner

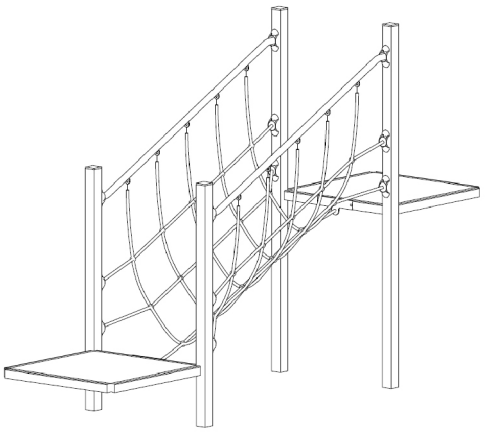
Combat Joiners are installed in the same way as Arch Bridges, except that a 'combat filler' is inserted top and bottom between the support beams and platform as shown in the diagram below. Attach the flanges to the hand rails (as detailed in "flanges" on page 6 of this manual) and attach to the uprights using 20mm tri-lobes. A platform on the ground is the best way of determining the spacing between uprights. (For exact distances see "Determining Distances between Uprights" at the front of this manual.)





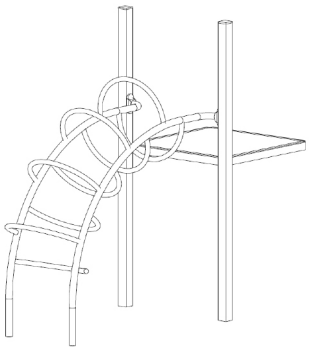
Congo Net

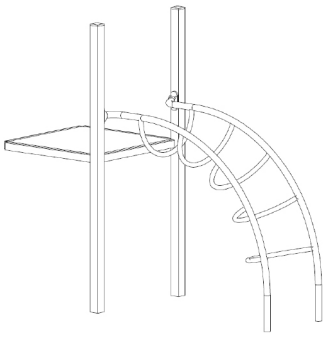
Use the handrails to determine the distance between uprights. (For exact distances see "Determining Distances between Uprights" at the front of this manual.) Dig holes for the uprights. Place the uprights in the holes and ensure that their depth is correct. Attach the flanges to the hand rails (as detailed in "flanges" on page 6 of this manual) and attach to the uprights using 20mm tri-lobes. After ensuring that the bolts are tightened and the uprights vertical, concrete them into the ground. Attach the Congo Net to the rails using 'S' hooks, ensuring that the 'S' hooks are fully closed using vice-grips. (The small end of the 'S' hook attaches to the chain link and the large end connects to the lug on the rails.) Attach the remaining ropes to the uprights using 20mm tri-lobes, applying a small amount of 'loctite' to the threads before tightening. Attach the connecting brackets to the centre rope using 20mm counter-sunk bolts, then the brackets to the platforms using 17mm tri-lobes and T-nuts. (Note: The net should be fitted so that the vertical ropes are on the inside of the net.)

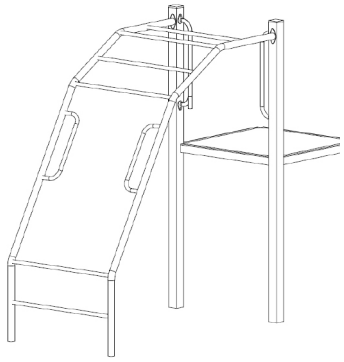


Creeping Crawler / Tunnel Crawler / Arch Bars (to ground)

Use the crawler/arch bars to determine the location of the holes for the legs. Dig the holes and insert the item to the correct height. Attach the flanges to the rails (as detailed in "flanges" on page 6 of this manual) and attach to the uprights using 20mm tri-lobes. It is advisable to place a brick or a block of wood below each leg to provide additional stability. Concrete the legs into the ground.
Arch bars have handgrips that attach the uprights using 20mm tri-lobes.

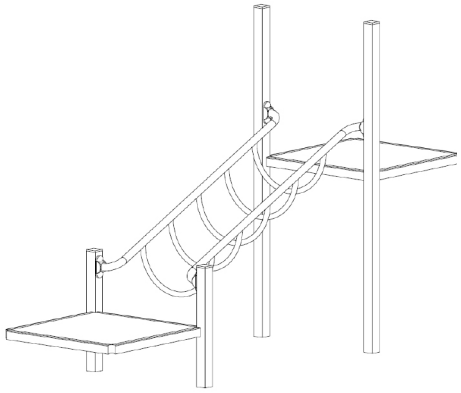




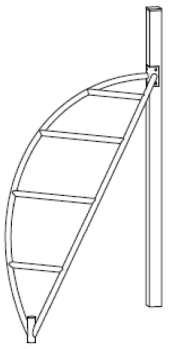


Creeping Crawler / Tunnel Crawler (between platforms)

Position the crawler on the ground with one end level with the uprights it will connect to. If the crawler is inclined you will need to raise the high end to the correct height. Mark the spot for the next two uprights, dig the holes and insert the uprights to the correct height. Attach the flanges to the rails (as detailed in "flanges" on page 6 of this manual), then lift the crawler into place and bolt onto the uprights using 20mm tri-lobes. After ensuring that all bolts are tightened and that the platform and uprights are level and at the correct height concrete the footings in place.

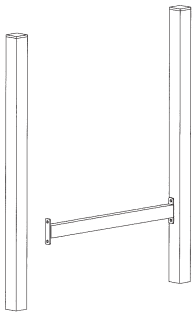


Crescent Climber



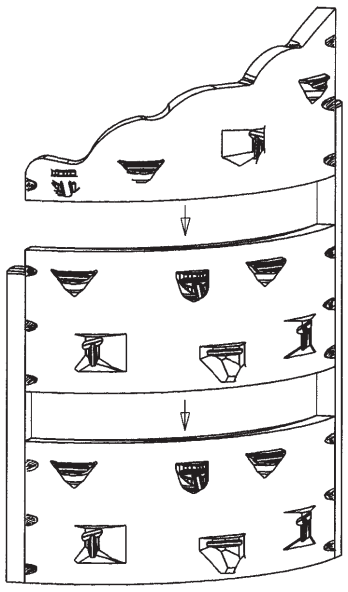
Use the Crescent Climber to determine the correct hole position, then dig the hole. Lower the Crescent Climber into place then connect to the upright using 20mm tri-lobes (two on each side of the upright). Concrete the lower leg into the ground.

End Frame Joiner



End frame joiners are used between uprights as a connector for items that would normally join onto the face of a platform. The end frame joiner is bolted between the two end uprights using 20mm tri-lobes. Items are then attached to the end frame joiner using stainless steel cap nuts and 30mm cup head bolts.

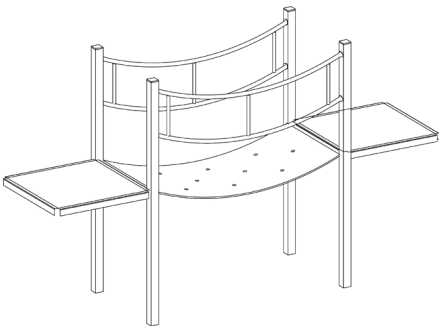
Everest Climber



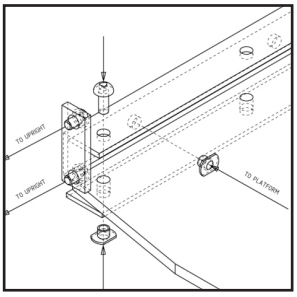
The various sections sit on top of each other like blocks. As the component is curved, the correct distance between the uprights can be measured using a square platform as a guide, using the upright position on the platform diagonally opposite the first. Mark the spot for the next upright, dig the hole and insert the upright at the correct height. If the blocks are going below a curved platform install the platform and uprights first then connect the Everest blocks. Because of the expanding and contracting nature of plastics the sections may be a tight fit and should be kept in a cool or shaded spot until ready to install. The block that sits on the ground has a plate with legs attached which fastens to the underside of the block using two 17mm tri-lobes. Fasten the block itself to the uprights with 25mm button head bolts and a washer, using an allen key. Apply a small amount of 'loctite' to the thread of each bolt before tightening. Sit the next block on top of the one below and attach to the uprights as described above. Each block has three holes in each side for fasteners, with the exception of the angled top section which only has one hole on the lower end. After ensuring that the bolts are tightened and the uprights vertical concrete the uprights and legs into the ground.

Flex Bridge

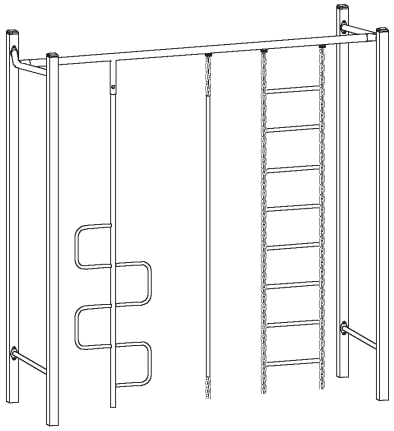
Using the spacer frames (or hand rail panels) as a guide to determine the distance from one platform to the next. Dig holes for the uprights at the opposite end of the spacer frames and insert them at the correct height. Fasten the spacer frames to the uprights using 17mm tri-lobes. Attach the platform and uprights at the opposite end. After ensuring that the platform and uprights are level and at the correct height concrete the footings in place.



On the ground, clamp the ends of the rubber bridge between the support bracket and the plate and fasten using 25mm tri-lobes and T-nuts as shown (5 each side), applying a small amount of 'loctite' to the threads before tightening. Make sure the top of the bracket is flush with the platform and ensure all bolts are tightly fastened. Attach the support brackets to the face of the platform using 17mm tri-lobes with 'T' nuts, and into the uprights using 20mm tri-lobes, applying a small amount of 'loctite' to the threads before tightening.

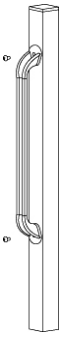


Gym Bars



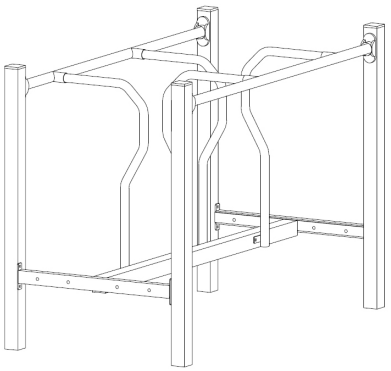
Position the top bar on the ground with the first end level with the uprights it will connect to. Mark the spot for the next two uprights as well as the firepole, ladder and spider pole. Dig the holes for the uprights and suspended attachments and insert the uprights to the correct height. Attach the firepole, ladder and spider pole to the top bar. The firepole and ladder are connected with 'S' hooks and the spider pole is fastened using a 'tap tight' tri-lobe. (Ensure the 'S' hooks are fully closed using vice-grips. The small end of the 'S' hook attaches to the chain and the large end connects to the lug on the top rail.) Attach the flanges to the top bar (as detailed in "flanges" on page 6 of this manual), lift into place and attach to the uprights using 20mm tri-lobes. After ensuring that the bolts are tightened and the uprights and activities are vertical, concrete the uprights and the 3 activities into the ground.

Handgrips



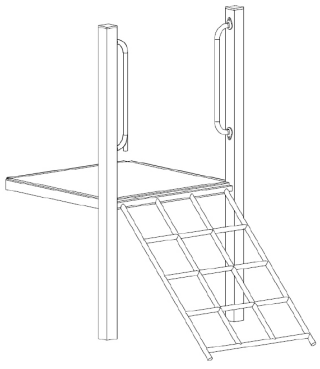
Handgrips are attached directly to the uprights using 20mm tri-lobes.

Hip Swivel

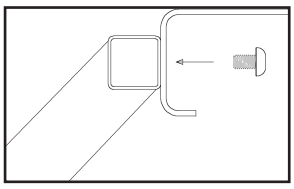


Using the handrails as a guide to determine the distance between uprights, dig holes for the uprights at the end of the handrails. (For exact distances see "Determining Distances between Uprights" at the front of this manual.) Place the uprights in the holes and ensure that their depth is correct. Attach the flanges to the hand rails (as detailed in "flanges" on page 6 of this manual), then attach to the uprights using 20mm tri-lobes. Attach the connecting platform or end frame joiner as required. Connect the beam to the platforms using 17mm tri-lobes and T-nuts, or to the frame joiners using stainless steel cap nuts and 30mm cup head bolts. Attach the swivel rails to the handrails using tap-tight tri-lobes and beam using 20mm tri-lobes. After ensuring that all bolts are tightened and that the platform and uprights are level and at the correct height concrete the footings in place.

Honeycomb Climber



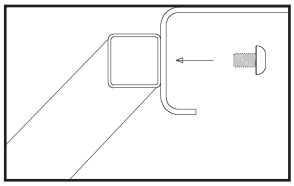
Use the honeycomb climber to determine the location of the holes for the legs. Dig the holes and attach the top of the honeycomb climber to the platform using 17mm tri-lobes entering from the underside of the platform. It is advisable to place a brick or a block of wood below each leg to provide additional stability. Concrete the legs into the ground. Attach the handgrips above the platform using 20mm tri-lobes.

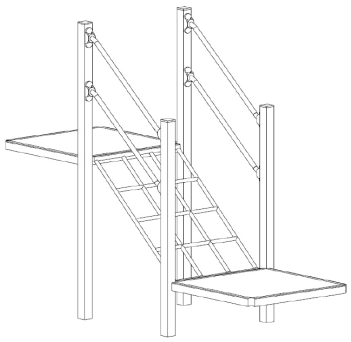


Honeycomb Joiner

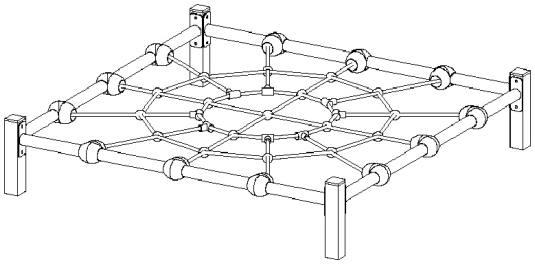
Using the handrails or honeycomb joiner as a guide to determine the distance from one platform to the next, dig holes for the uprights at the end of the handrails. (For exact distances see "Determining Distances between Uprights" at the front of this manual.) After placing the uprights in the holes and ensuring that their depth is

correct, bolt the handrails to the uprights using flanges. Dig other holes for the connecting platform as required and attach the platform. Fit the honeycomb joiner between the platforms using 17mm tri-lobes entering from the underside of the platform. After ensuring that all bolts are tightened and that the platform and uprights are level and at the correct height concrete the footings in place.

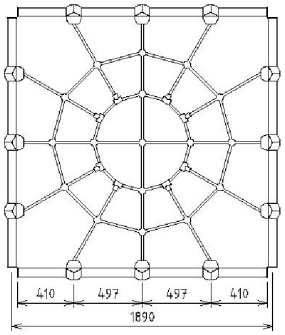




Horizontal Web

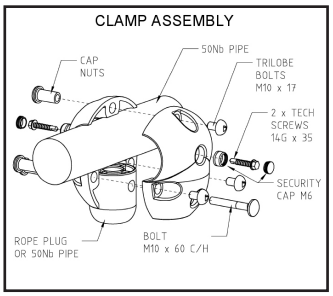


Using the side rails as a guide to determine the distance between uprights, dig holes for the uprights at the end of the rails. (For exact distances see "Determining Distances between Uprights" at the front of this manual.) After placing the uprights in the holes and ensuring that their depth is correct, bolt the rails to the uprights using 20mm tri-lobes.



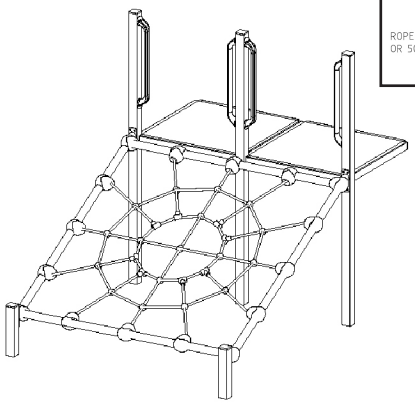
Attach the clamps (that will be used to secure the ropes) to the rails according to the dimensions shown and using 17mm tri-lobes and cap nuts. Before the bolts are inserted you should apply a small amount of 'loctite' to the thread.

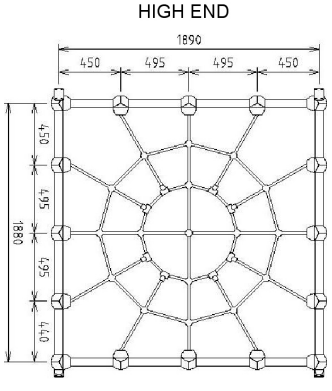
Fit the net by sliding the plugs on the end of the ropes into the hole at the end of each clamp (see diagram) and securing in place using a 60mm cup head bold and a cap nut. Before the bolts are inserted you should apply a small amount of 'loctite' to the thread. Tension the ropes as required by gently sliding the clamps slightly along the rails and then secure in place using a tech screw on both sides of each clamp into the rail.



Inclined Web

Using the side rails as a guide to determine the distance between uprights, dig holes for the uprights at the opposite end of the rails.
(For exact distances see "Determining Distances between Uprights" at the front of this manual.) After placing the uprights in the holes and ensuring that their depth is correct, bolt the inclined side rails to the uprights using 20mm tri-lobes. Secure the horizontal rails using clamps as shown, with the lower clamps sitting at the very base of the inclined rails and the higher clamps 1880mm along the rails when measured from centre of clamp to centre of clamp.

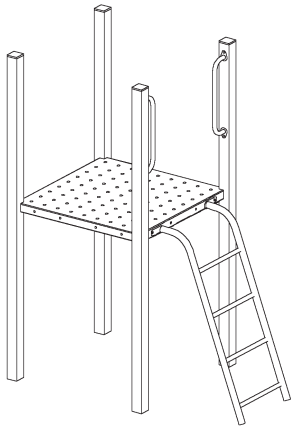




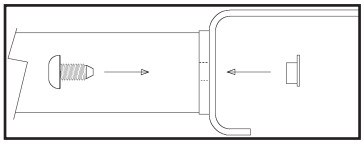
Attach the clamps (that will be used to secure the ropes) to the rails according to the dimensions shown and using 17mm tri-lobes and cap nuts. Before the bolts are inserted you should apply a small amount of 'loctite' to the thread.

Fit the net by sliding the plugs into the hole at the end of each clamp (see diagram) and securing in place using a 60mm cup head bold and a cap nut. Before the bolts are inserted you should apply a small amount of 'loctite' to the thread. Tension the ropes as required by gently sliding the clamps slightly along the rails and then secure in place using a tech screw on both sides of each clamp into the rail.

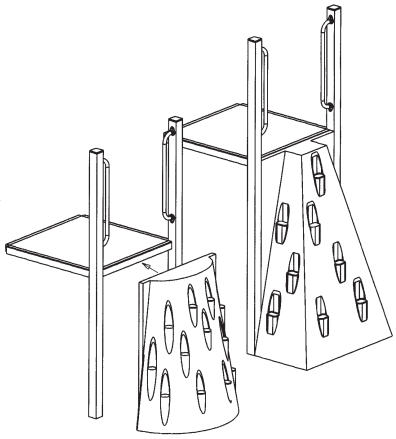
Ladder / Arch Ladder



Use the ladder to determine the location of the holes for the legs. Dig the holes, insert the ladder to the correct height and attach to the platform using 17mm tri-lobes and T-nuts. It is advisable to place a brick or a block of wood below each leg to provide additional stability. Concrete the legs into the ground. Attach the handgrips above the platform using 20mm tri-lobes.

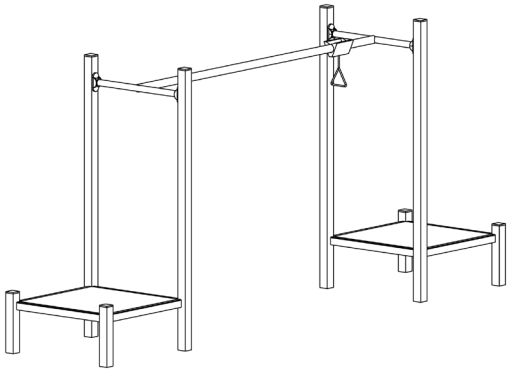


Mountain Climber / Pyramid Climber

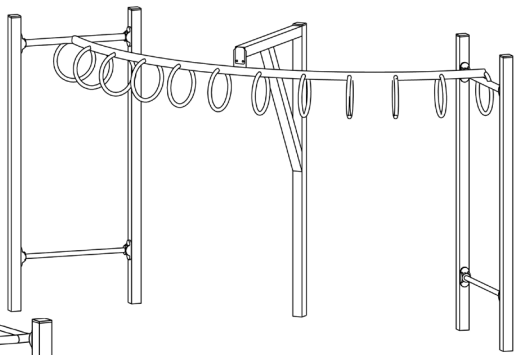


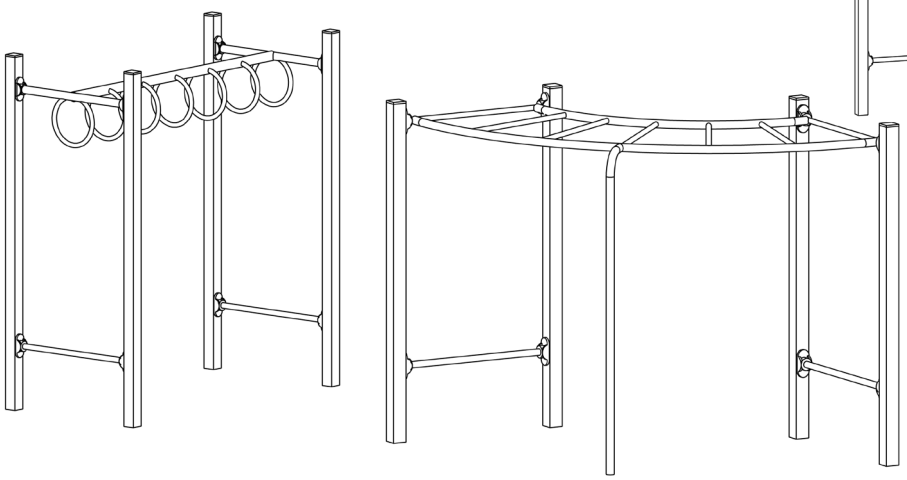
Position the climber in place between the two uprights with the top surface level with the top of the platform. From underneath the platform attach the top of the climber to the platform using 17mm tri-lobes and T-nuts. Position the two 25x25 brackets on either side of the inside of the Pyramid/Mountain Climber, (down the length of the upright) and secure the sides of the climber to the uprights using 50mm torx bolts (entering from underneath the platform). Start at the top and work down, inserting each bolt loosely. This may require some manipulation due to shrinkage or expansion common to plastics. Once the climber is secure and all bolts tightened attach the handgrips above the platform using 20mm tri-lobes.

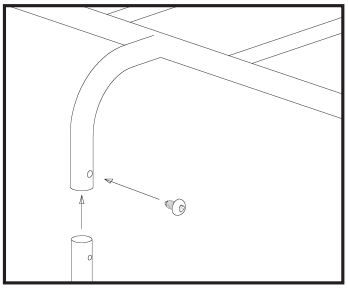
Overhead Items **(Monkey Bars, Roman Rings/Triangles, Hang 'n' Glide, Challenge Rail, Trapeze Bars, Roman Monkey Bar, Wave Bars and Vine Crossing)**



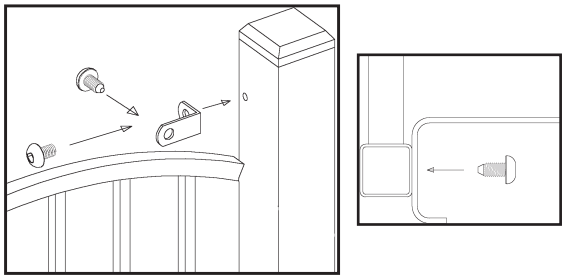
Position the overhead item on the ground with the first end level with the uprights it will connect to. Mark the spot for the next two uprights, dig the holes and insert the uprights to the correct height. Attach the flanges to the top bar (as detailed in "flanges" on page 6 of this manual), then attach to the uprights using 20mm tri-lobes. Ensure that the bolts are tightened, the uprights vertical and the overhead item horizontal (except in the case of inclined and arched items). After attaching any connecting rungs, steps or platforms, concrete the uprights into the ground.
(**Note:** Some 4 metre and curved items also have a support leg that needs to be attached at the centre using two 17mm tri-lobes and T-nuts. Curved Monkey Bars have a support leg that is fastened into the top bar using a 'tap tight' tri-lobe. Once the support legs are secure they should also be concreted into the ground.)



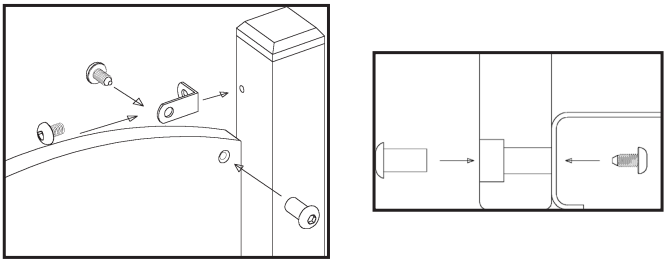




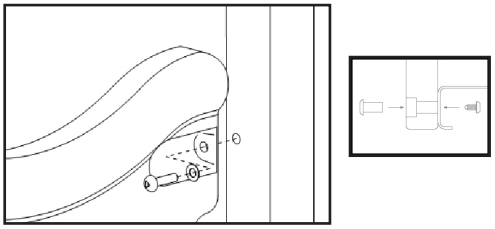
Panels (over)



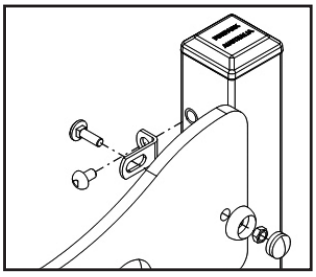
Steel Panels
The top of the panel is connected to the upright using 'L' brackets. The 'L' bracket is fastened directly to the upright and the panel using 17mm tri-lobes. The base of the panel is fastened to the platform using 17mm tri-lobes. The base of the slide entry panel fastens to the platform using 17mm tri-lobes and T-nuts.



Plastic Panels (arched top)
The top of the panel is connected to the upright using 'L' brackets. The 'L' bracket is fastened directly to the upright using 17mm tri-lobes and to the panel using 17mm tri-lobes and cap nuts. The base of the panel is fastened to the platform using 17mm tri-lobes and cap nuts.

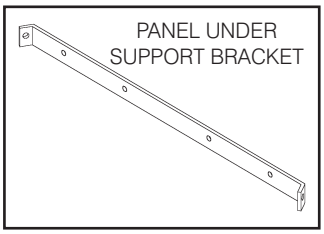


Bubble Panels
The top of the panel is connected directly to the upright using 40mm tri-lobes and 10mm washers. The base of the panel is fastened to the platform using 20mm tri-lobes and cap nuts.



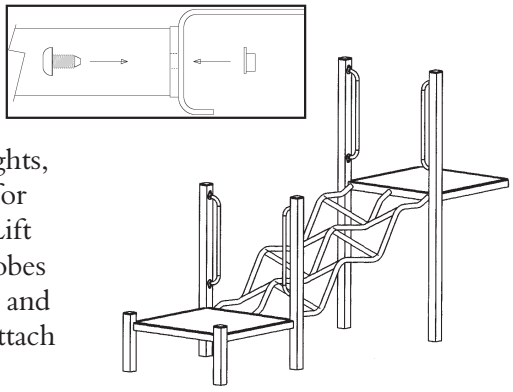
Routed Tri-laminate Panels
The top of the panel is connected to the upright using 'L' brackets. The 'L' bracket is fastened directly to the upright using 17mm tri-lobes and to the panel using 30mm cup head bolts, with the nut on the outside face of the panel enclosed in a security cap. The base of the panel is fastened to the platform using 30mm cup head bolts, with the nut on the outside face of the panel enclosed in a security cap.

Panels (under platform)



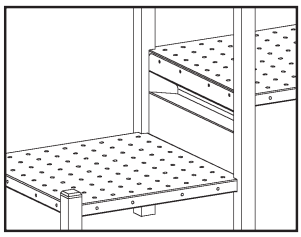
Panels under are fastened at the top of the panel using the same fasteners as 'panels (over)'.
The bottom of steel panels and moulded plastic panels is fastened using 'L' brackets on either side, using the same fasteners as described above in 'panels (over)'.
Routed tri-laminate panels are fastened to a 'panel under support bracket' using the same fasteners as described above in 'panels (over)'. The support bracket is then fastened to the uprights using 20mm tri-lobes.
Wombat Tunnels are fastened to the uprights in the same way but have legs that need concreting into the ground.
Counting Panels are attached bolting their flanges directly into the uprights using 17mm tri-lobes.

Pinnacle Climber



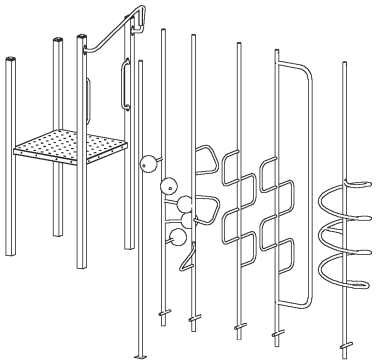
Position the pinnacle climber on the ground with the first end level with the platform it will connect to. If the climber is inclined you will need to raise the high end to the correct angle. Mark the spot for the next two uprights, dig the holes and insert the uprights to the correct height. Dig other holes for the connecting platform as required and attach the platform and uprights. Lift the pinnacle climber into place and attach to the platform using 17mm tri-lobes and T- nuts. After ensuring that all bolts are tightened and that the platform and uprights are level and at the correct height concrete the footings in place. Attach the handgrips to the uprights on both ends using 20mm tri-lobes.

Platform Infill / Step Infill



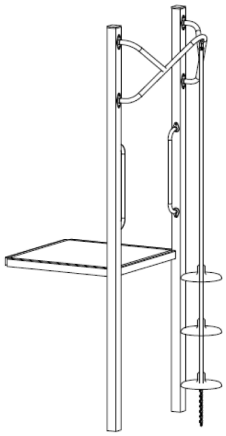
Loosely attach the top of the infill to the upper platform using 17mm tri-lobes and T-nuts. Attach the bottom of the panel to the lower platform in the same way. Both top and bottom should be fastened with four bolts each. When the infill is in place tighten all bolts. Infills between a platform and the ground are attached on the bottom to a support bracket between uprights and attached to the uprights using 17mm tri-lobes.

Poles **(Firemans Pole, Spider Pole, Spider Climber, Step Up, Spiral Climber, Helix Climber, Ball Climber)**



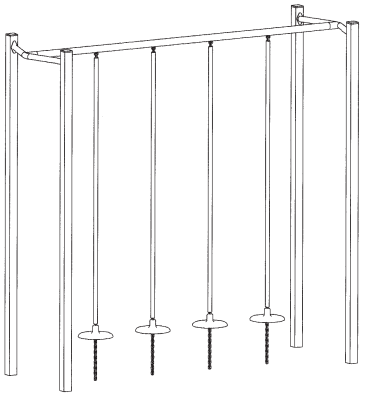
Attach the firepole top to the pole using a 'tap tight' tri-lobe (the top is common to all poles). Lift the pole into its approximate place to determine the position of the hole in the ground. Dig the hole (approximately 600mm below finished ground level) and place the pole into position. Attach the flanges to the firepole top (as detailed in "flanges" on page 6 of this manual), then attach to the uprights using 20mm tri-lobes. It is advisable to place a brick or a block of wood below the pole to provide additional stability. Ensure the pole is vertical then concrete into the ground. Attach the handgrips above the platform using 20mm tri-lobes.
(The plastic steps on the Step Up Pole should be attached to each rail using 17mm tri-lobes.)

Pommel Climber



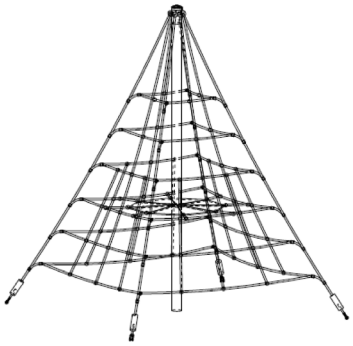
Attach the flanges to the pommel fire top (as detailed in "flanges" on page 5 of this manual), then attach to the uprights using 20mm tri-lobes. Apply a small amount of 'loctite' to the threads before tightening. Dig a hole approximately 800mm below finished ground level) directly below the connection point on the top. Connect the pommel climber chain to the top using an 'S' hook. (Ensure that the 'S' hooks are fully closed using vice-grips. The small end of the 'S' hook attaches to the chain and the large end connects to the lug on the top rail.) Allow the chain to hang into the hole. (If rubber surfacing is to be used, a pommel/chain anchor is supplied. The chain should be cut just above finished ground level and the anchor connected using an 'S' hook.) Ensure the chain is taut and vertical then concrete into the ground. Attach the handgrips above the platform using 20mm tri-lobes.

Pommel Walker / Jungle Gym



Position the top bar on the ground with the first end level with the uprights it will connect to. Mark the spot for the next two uprights. Dig the holes and insert the uprights to the correct height. Attach the suspended chains to the top bar using 'S' hooks (ensure that the 'S' hooks are fully closed using vice-grips with the small end of the 'S' hook attaching to the chain and the large end connecting to the lug on the top rail). Attach the flanges to the top bar (as detailed in "flanges" on page 6 of this manual), then lift the top bar into place and bolt onto the uprights using 20mm tri-lobes. Dig a hole directly below each suspended chain and pommel. Allow the chains to hang into the holes, ensuring that they are taut. (If rubber surfacing is to be used, a pommel/chain anchor is supplied. The chain should be cut just above finished ground level and the anchor connected using an 'S' hook.) After ensuring that the bolts are tightened and the uprights vertical concrete the uprights and the lower end of the chains into the ground.

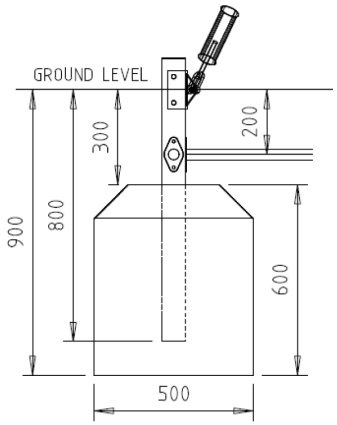
Pyramid Net



The Pyramid Net can either be installed as a free standing unit or as part of another structure connected via a shared upright.

The net has four uprights forming a square (each upright is 2835mm apart when measured from centre to centre) and a central post. The outside uprights are held in position by four rails which will sit 200mm below finished ground level.

Attach the flanges to the rails (as detailed in "flanges" on page 6 of this manual), then use the rails to determine the hole positions for the corner uprights, ensuring that they form a perfect square. Dig holes 500mm x 500mm wide and 900mm (deep), then dig trenches 250mm deep between each of the holes for the rails. The hole for the centre post is the same size and must be exactly in the centre of the square (the intersection of diagonal lines between opposing corners).



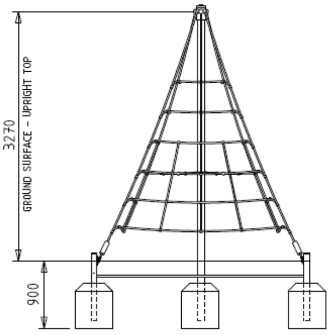
After connecting the rails to the corner uprights using flanges, attach the brackets to the uprights using 17mm tri-lobes. Insert the uprights into the holes and rest the base on bricks or blocks. The hole in the triangular part of the bracket should sit at finished ground level as shown.

The centre pole should be oriented so that the 2 holes at the top of the pole and the 4 holes on the flange mid-way up the pole face directly toward the corner uprights. The top of the centre pole should be 3270mm above finished ground level. The centre pole may need support until the concrete has set.

Pour concrete around the base of the four corner uprights and the centre pole, forming a footing of 500mm x 500mm x 600mm (deep). Taper the top of the concrete so that water won't pool around the uprights. Be sure the top of each concrete footing is 300mm and the rails 200mm below finished surface level. Check that the uprights and centre pole are vertical and leave for 2 days ideally to allow concrete to set.

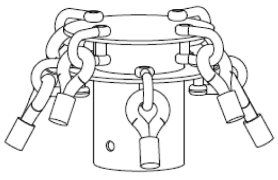
Connecting the Net

Lower the rubber membrane over the centre pole and fasten to the flange using 17mm tri-lobes and T-nuts with a washer between the bolt head and the rubber. (The rubber sits on top of the flange, with tri-lobe and washer entering from the top and T-nut underneath.) Apply 'loctite' to the bolt thread before fastening.



Lift the net over the centre upright and sit the cap on top of the centre pole, ensuring that the net is orientated so that the holes in the cap line up with the holes in the pole. (One or two ladders will be required for this.) Insert 2 'tap tight' tri-lobes through the lower holes on the cap section and into the centre pole to secure.

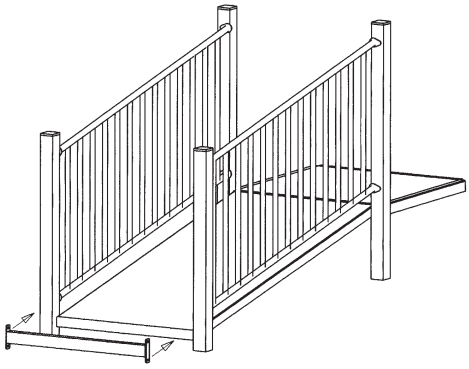
Attach the outside of the rubber membrane to the ropes using the stainless steel clamps supplied, 25mm tri-lobes and T-nuts. Apply 'loctite' to the bolt thread before fastening.



Connect the turnbuckles at the corners of the net to the brackets on the corner uprights using a 12mm D-shackle pin and a shear-nut (the dome part of the not goes on the thread first). Apply 'loctite' to the nut before tightening. Tighten until the head of the shear-nut comes off the nut. Remove the pre-cut tab from the pin and file any sharp edges. Tighten the turnbuckles uniformly (using a screwdriver or similar tool inserted into the hole in the turnbuckle and rotating the turnbuckle clockwise), allowing for deflection of corner ropes of no more that 100mm. When the ropes are taut, drill through the hole in the lower end of each of the turnbuckles, right through the threaded bolts and out the other side, using a 9/64" (or 3.5mm) drill bit and insert a spring pin. (This can be hammered out and replaced at a later date if the net needs adjusting.

Ramp

Using the handrails or side panels as a guide to determine the distance from one platform to the next, dig holes for the uprights at the end of the handrails. (For exact distances see "Determining Distances Between Uprights" at the front of this manual.) After placing the uprights in the holes and ensuring that their depth is correct, bolt the handrails to the uprights using 17mm tri-lobes. Dig holes for the uprights on the connecting platform and attach the platform. Where the ramp goes to ground an 'end frame joiner' is used between the lower uprights (see 'end frame joiners').

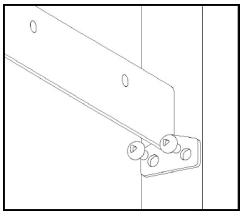


Fit the ramp between the platforms using 17mm tri-lobes and T-nuts. When joining onto end frame joiners use stainless steel cap nuts and 30mm cup head bolts. When joining a ramp between 2 platforms or between a platform and an End Frame Joiner, it is necessary to insert a Cargo Plate (5mm spacer) between the ramp and platform on one end only. When connecting to a Ramp Joining Bracket this is not necessary. After ensuring that all bolts are tightened and that the platform and uprights are level and at the correct height concrete the footings in place.

Ramp Joining Bracket

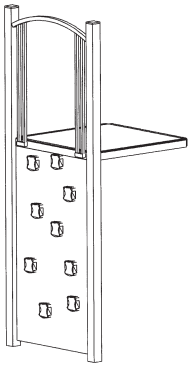
Ramp joining brackets are used between uprights as a connector between two ramps. The joiner is fastened to the uprights using 17mm tri-lobes. The ramps are then connected either side of the joiner and fastened using 17mm tri-lobes and T-nuts.

Rock Climbing Wall



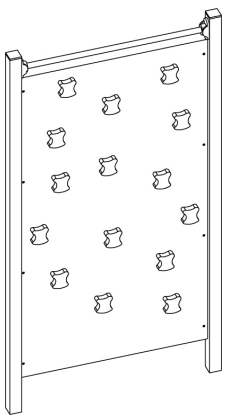
Position the rock climbing wall in place between the two uprights with the top just below the bottom of the platform. Using 17mm tri-lobes attach the sides of the wall to the uprights entering from underneath the platform. Start at the top and work down. Once the rock climbing wall is secure attach the handgrips or entry panel above the platform.

Rock Wall – Double Sided

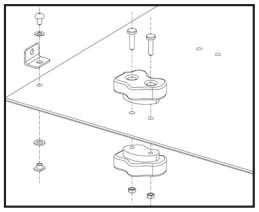


The Rock Wall can either be assembled completely on the ground and then lifted into place if it is a free-standing item, or if it is connected to other parts of the equipment the wall can be connected to the uprights once they are in the ground. Use the rock wall to determine the position of both upright holes. Dig the holes and insert the uprights ensuring that the position for the height of the top rail is no greater than 2350mm from the finished ground surface.

Attach the brackets to the rock wall using a 17mm tri-lobe and a 10mm washer through the bracket and a T-nut and nylon washer through the reverse side of the wall. Position the rock wall in place between the uprights and fasten using 17mm tri-lobes. Connect the rail above the rock wall using flanges.

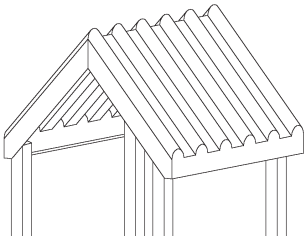
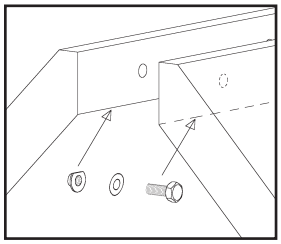
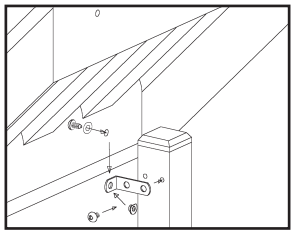


After ensuring that the bolts are tightened and the uprights vertical concrete the uprights into the ground.



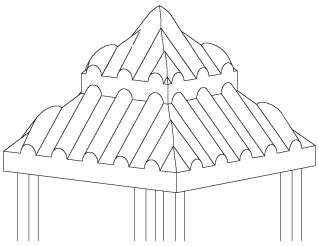
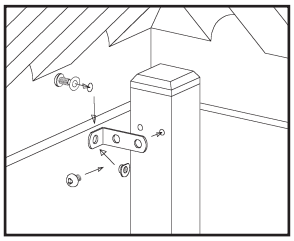
Roof – Plastic 2-Way

Attach the 'L' brackets to the uprights using two 17mm tri-lobes on each bracket. Connect the two sections of the roof together along the ridge using 17mm tri-lobes with washers and T-nuts. Lift the roof into place and hold it in place level with the 'L' brackets. Fasten the roof to the 'L' brackets using 17mm tri-lobes with washers and T-nuts. Once the roof is in place tighten all bolts.

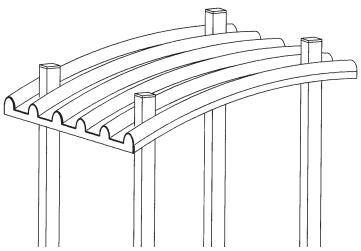
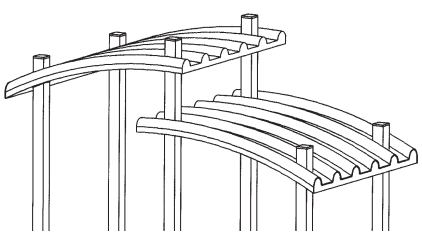
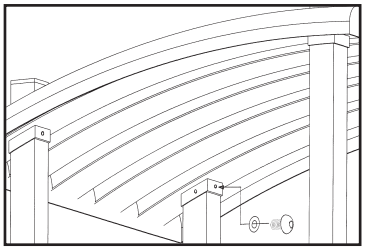
Roof – Plastic 4-Way

Attach the 'L' brackets to the uprights using two 17mm tri-lobes on each bracket. Lift the roof into place and hold it in place level with the 'L' brackets. Fasten the roof to the 'L' brackets using 17mm tri-lobes with washers and T-nuts (with the tri-lobes pointing inwards from the outside). Once the roof is in place tighten all bolts.

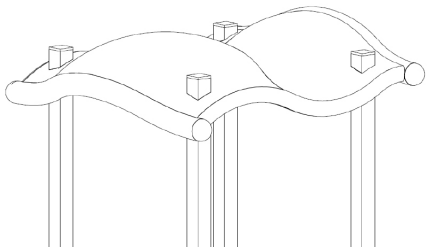
Roof – Plastic Curved, Arched and Poly

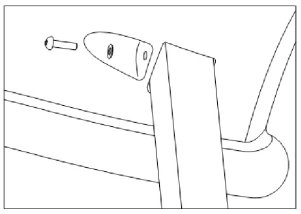
Raise the roof over the uprights and lower down over the uprights until the holes in each flange in the roof lines up with the holes in the upright. Fasten using a 17mm tri-lobe with washer into each upright. Where multiple roofs overlap (sharing common uprights) each roof will need to be placed in order with the lowest roof going on first. In instances where the roofs sit on top of one another the bolts should not be inserted until all roofs have been lowered over the uprights. With all roofs resting lower than their final position begin by fastening the top roof first, then raise each successive roof into place and fasten. (**Note:** Where four roofs intersect a common upright the middle two will sit at the same level. The adjoining corners have been trimmed off to enable them to sit flush.) Ensure that each roof is placed in the order and orientation as indicated by the drilling positions on the plan.

Roof – Plastic Wave

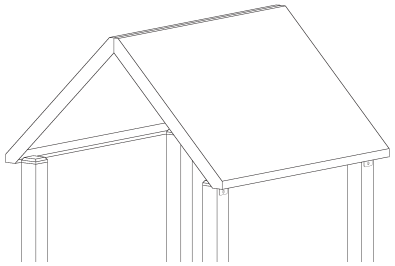
Raise the roof over the uprights and lower down with each hole in the roof over an upright, ensuring the orientation matches the plan. When the holes in the recesses on the underside of the roof line up with the holes in the uprights, fasten using a 17mm tri-lobe with washer into each upright. Where multiple roofs overlap (sharing common uprights), each roof will need to be placed in order with the lowest roof going on first.





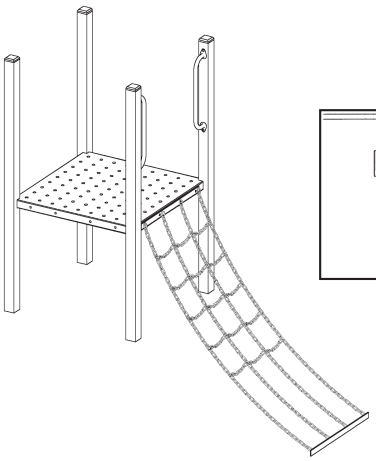
Roof – Steel

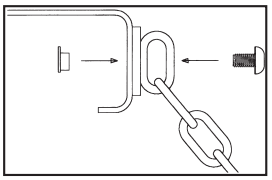
Attach the 'L' brackets to the uprights using 17mm tri-lobes. Connect the two sections of the roof together along the ridge using hex head bolts with washers and T-nuts. Lift the roof into place and rest it on the 'L' brackets. Fasten the lower edges of the roof to the 'L' brackets using 17mm tri-lobes and T-nuts (with the tri-lobes pointing up from the underside). Once the roof is in place tighten all bolts.



Rung Climber / Net Climber

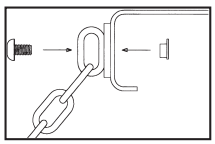
Attach the top bracket on the rung climber/net climber to the platform using 17mm tri-lobes and T-nuts with the 'T-nut being on the underside of the platform, applying a small amount of 'loctite' to the threads before tightening. Pull the chain net away from the platform at an angle of around 70 degrees until some point on the net touches the ground when taut and mark that point on the ground. Dig a trench wide enough for the bar at the base of the net at that point. Place the bar in the trench to a depth of approximately 500mm then concrete. Attach the handgrips above the platform using 20mm tri-lobes.

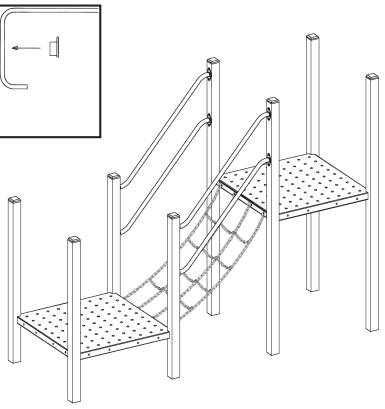




Rung Joiner / Cargo Net

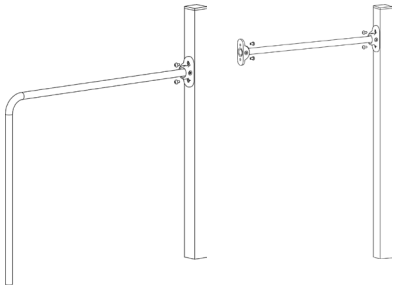
Using the handrails or side panels as a guide to determine the distance from one platform to the next, dig holes for the uprights at the end of the handrails. (For exact distances see "Determining Distances Between Uprights" at the front of this manual.) Place the uprights in the holes and ensure that their depth is correct. Attach the flanges to the rails (as detailed in "flanges" on page 6 of this manual), then attach to the uprights using 20mm tri-lobes. Dig holes for the uprights on the connecting platform and attach the platform.





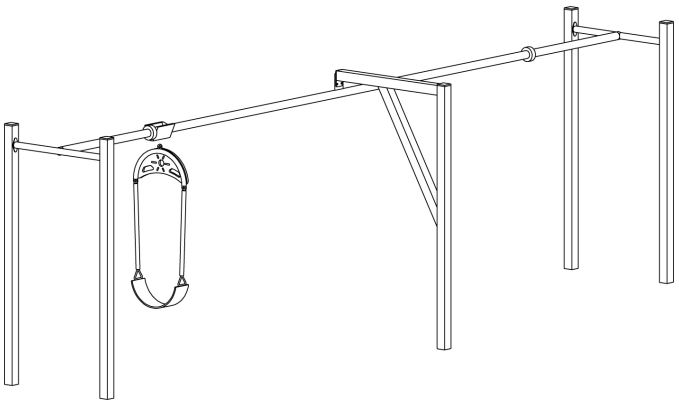
Attach the brackets on either end of the rung joiner/cargo net to the platforms using 17mm tri-lobes inserted into T-nuts with the T-nut being on the underside of the platform. Apply a small amount of 'loctite' to the threads before tightening. After ensuring that all bolts are tightened and that the platform and uprights are level and at the correct height concrete the footings in place.

Rung / Roll Over Bar / Chin Up Bar



Attach the flanges to the Rungs, Roll Over Bars, Chin Up Bars (as detailed in "flanges" on page 6 of this manual), then attach to the uprights using 20mm tri-lobes. Concrete the leg into the ground.

Seat Glide



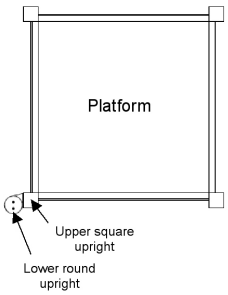
The Seat Glide can be installed with or without platforms. If platforms are included in the design these should be added once the top bar is in place (as described in the front section of this manual).

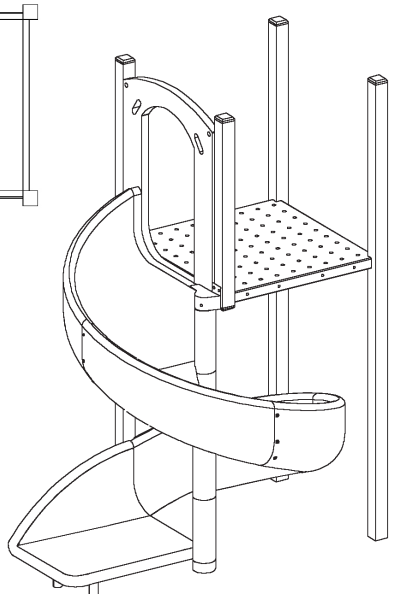
Connect both sections of the top bar and position on the ground in the location it is to stand. Using the top bar as a guide, mark the spot for the uprights on both ends. Dig the holes and insert the uprights to the correct height. (The centre of the holes at the top of the uprights where the top bar joins should be 1850mm above finished ground level on the item without platforms and 2250mm where platforms are included.)

Attach the flanges to the top bar (as detailed in "flanges" on page 6 of this manual). Lift the top bar into place then attach to the uprights using 20mm tri-lobes, applying a small amount of 'loctite' to the threads before tightening. Dig a hole for the support leg and insert into the ground then connect to the bracket at the top of the top bar using 17mm tri-lobes and T-nuts. Ensure that the bolts are tightened, the uprights vertical and the top bar horizontal. If platforms are included attach them with the other uprights, then concrete all uprights into the ground.

The section of the seat glide will already be connected to the top bar. Once the concrete has set, the seat and chains should be connected using 'S' Hooks (ensure that the 'S' hooks are fully closed using vice-grips with the small end of the 'S' Hook joining the chain.)

Slide – Spiral



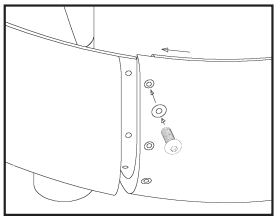


The Spiral Slide upright is made up of two sections which will be connected once the slide is in place. The top of the lower (round) section sits level with the bottom of the platform (ensuring that the platform is level) and is off-set as per the diagram. The upper section will not be connected to the platform and to the lower section until the slide is in place, so care will need to be taken to ensure that the round upright is in the correct position and at the correct level.

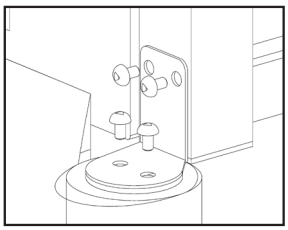
It is advisable to place a brick or block below the round upright to prevent it sinking lower into the ground as the slide sections are fitted. Once the round upright is in place, lower the bottom (exit) section of the slide onto it. The resting point of this section is determined by a collar on the lower part of the upright. Use this section to determine the location of the hole in the ground for the slide legs and dig the hole. Do not concrete the legs into the ground at this stage as the levels will need to be checked once the slide is assembled.

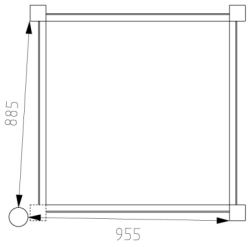
Slide the other sections of the slide in order into place over the round upright. The corresponding connecting faces of each section will be marked with the numbers 1, 2, etc. Bolt each piece to the section below using

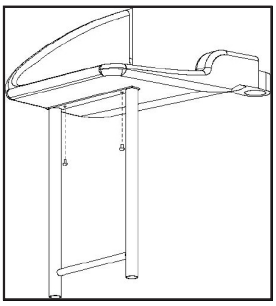
25mm tri-lobes and washers. (Some pressure will need to be applied to each section to manipulate it into place to connect to the section below.) If concrete has already been poured around the upright, ensure that it has completely set before connecting slide sections. If the concrete is to be added later the upright will sink lower into the ground as the slide sections are fitted and the level will need to be re-adjusted prior to concreting.



Once all sections of the slide are in place, connect the top (square) section of the upright to the round upright using the bracket and 17mm tri-lobes. At this point the upright may need to be raised if the base has settled deeper into the ground. Check that the base of the upright is positioned the right distance from the other uprights as shown in the diagram. Ensure that the platform is level and that the upright connects to the platform at the correct height above finished surface level according to the plan. Attach the square section of the upright to the platform using 20mm tri-lobes. Attach the slide entry panel to the platform and uprights as detailed under "Panels (over)", using 40mm tri-lobes at the bottom and 25mm tri-lobes and cap nuts at the top.

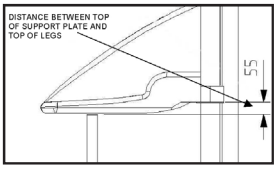






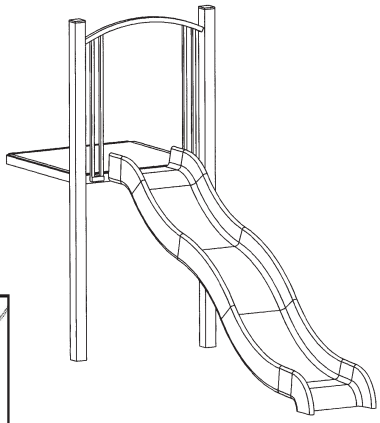
Rotate the slide, bringing the top section around until it butts up to the face of the panel and fasten from underneath using 25mm tri-lobes and washers.

The slide leg bracket is now attached to the underside of the exit section using 17mm tri-lobes. It is advisable to place a brick or block of wood under each leg to provide additional stability. Before concreting it is important that the top of the leg support sits 55mm below the top of the collar on the upright supporting the bottom section of the slide. This height can be checked using a spirit level. If necessary the leg supporting the exit section may need to be manually raised (jacked up). Once the heights are correct and everything is square, concrete the legs and uprights into the ground.

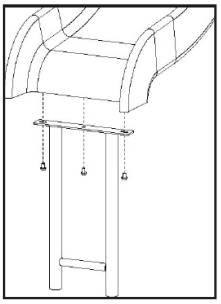


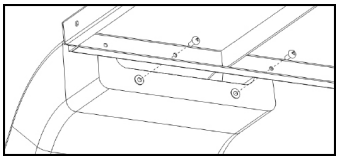
Slide – Straight, Wave, Curved and Double

Locate the slide in its approximate position to determine the position of the holes for slide support legs and dig the holes. (All slides have 2 legs at the base. Curved slides and plastic 1600mm slides also have a support leg half way up the slide.) Attach the slide leg(s) to the underside of the base of the slide using 17mm tri-lobes.



Attach the slide to the platform using 25mm tri-lobes entering from the underside of the platform into the slide. (If the back of the slide has a metal plate in place, 17mm tri-lobes should be used instead.)





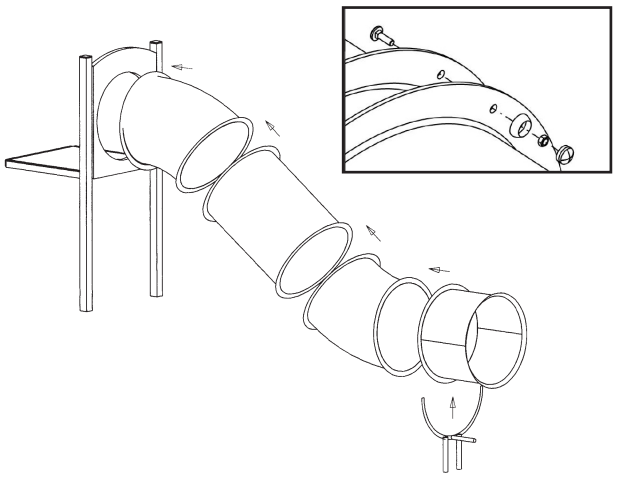
It is advisable to place a brick or a block of wood below each leg to provide additional stability. Concrete the legs into the ground. Attach the slide panel as described under "Panels (over)".

Slide – Tunnel (Straight)

Attach the slide panel to the platform and uprights as detailed under "Panels (over) - Plastic".

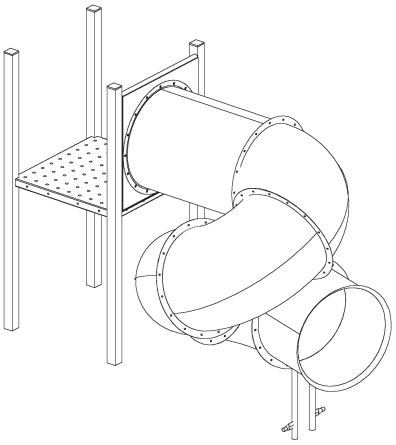
Connect the sections of the tunnel slide together using 30mm cup head bolts (except where the slide leg cradle attaches), nuts and security caps as shown. The seams on each tunnel section should be positioned vertically

(top and bottom). Connect the top section to the entry panel using 50mm cup head bolts, nuts and security caps. Attach the slide legs to the support cradle using 'tap tight' tri-lobes. Attach the cradle at the point where the lower 2 sections join, with one cradle on either side of the flanges, using 50mm cup head bolts, nuts and security caps. The steel cradles should be on the outside, sandwiching the plastic flanges between them. (Make sure the support pipe on one of the cradles is pointing forward, supporting the end section.)



Use the slide as a guide to determine the position of the holes for the support legs and dig holes. It is advisable to place a brick or a block of wood below each leg to provide additional stability. Concrete the legs into the ground.

Slide – Tunnel (Spiral)



The slide is installed as detailed under "Slides – Tunnel (Straight)" with the following variations.

1. Additional support legs are used to support the slide, however only one cradle is used at each support point. Where two tunnel sections connect the cradle connects to the lower side of the flange. The cradle at the exit of the slide connects on the under-side, while the higher cradles attach to the side of the tunnel flanges in such a way that the support legs will point vertically down. Each leg should be installed with the base 600mm below finished ground level. Use this as a guide to determine the point on the tunnel that each cradle attaches. All cradles are attached to the flanges using 40mm cup head bolts, nuts and security caps.

2. The orientation of each tunnel section is determined using a process referred to as "cranking". Cranking consists of placing the flanges of both sections together with the seams of the section to be attached aligned to the seams of the previous section, and rotating it either clockwise or anti-clockwise by the required number of bolt holes in the flanges. (For example, 3 cranking steps would involve rotating the section by 3 bolt holes.) Note: Clockwise is determined while standing on the ground, facing up the slide.
   Begin by attaching the 1 metre straight section to the plastic entry panel with the seams of the tunnel vertical (top and bottom). Connect each following section in turn, aligning the seams to the previous section then rotating the section by the number of cranking steps as detailed below.

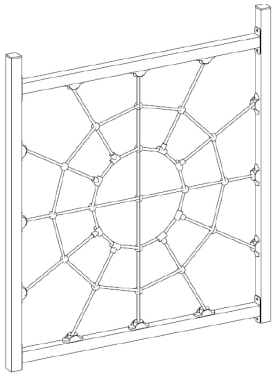
1200 Spiral Slide

Piece Number	Description	Cranking Steps	Direction
2	1st 90° elbow	3	Clockwise
3	2nd 90° elbow	1	Anti-clockwise
4	3rd 90° elbow	2	Anti-clockwise
5	4th 90° elbow	1	Anti-clockwise
6	Exit	0	Any direction

1600 Spiral Slide

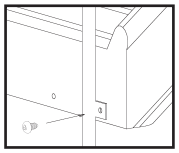
Piece Number	Description	Cranking Steps	Direction
2	1st 90° elbow	3	Clockwise
3	2nd 90° elbow	1	Anti-clockwise
4	3rd 90° elbow	2	Anti-clockwise
5	4th 90° elbow	2	Anti-clockwise
6	5th 90° elbow	1	Anti-clockwise
7	Exit	0	Any direction

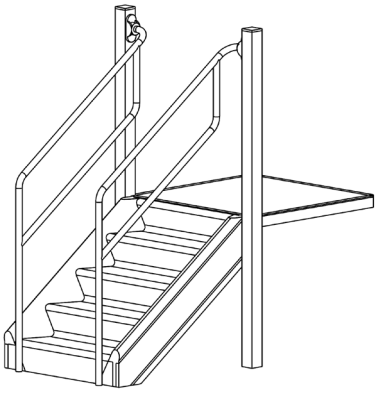
Spider Net



Use the top or bottom bar to determine the position of both upright holes. Dig the holes and insert the uprights ensuring that the under-side of the bottom bar will sit 50mm above the finished ground surface. Attach the top and bottom bars to the uprights using 17mm tri-lobes. Attach the Spider Net to the frame using 20mm tri-lobes. Apply a small amount of 'loctite' to the threads before tightening. Ensure that the uprights are vertical then concrete into the ground.

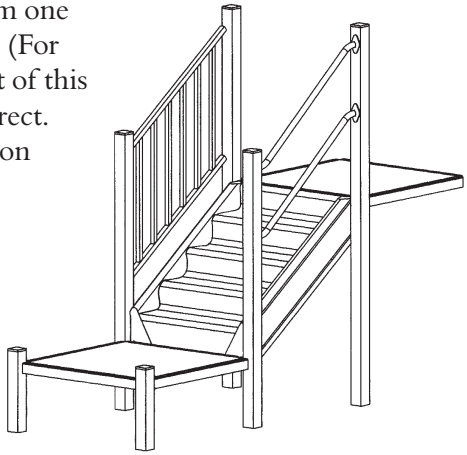
Stairs – Plastic / Ripple Ramps (to ground)





Mark the position of the handrails on the ground and dig two holes. Attach the flanges to the rails (as detailed in "flanges" on page 6 of this manual), then loosely attach to the uprights using 20mm tri-lobes. Attach the stairs to the platform using 17mm tri-lobes entering from the underside of the platform, then fasten the base of the handrails to the stairs using flanges. When all bolts have been tightened, concrete the footings of the handrails.

Stairs – Plastic / Ripple Ramps (between platforms)

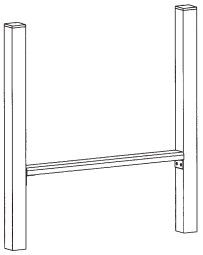


Using the handrails or side panels as a guide to determine the distance from one platform to the next, dig holes for the uprights at the end of the handrails. (For exact distances see "Determining Distances between Uprights" at the front of this manual.) Place the uprights in the holes and ensure that their depth is correct.
If handrails are used, attach the flanges to the rails (as detailed in "flanges" on page 6 of this manual), then attach to the uprights using 20mm tri-lobes.
If side panels are used, bolt them to the uprights using 17mm tri-lobes.
Attach the platform and uprights at the opposite end.

Place the plastic stairs/ripple ramp in place and bolt to the platforms using 17mm tri-lobes entering from the under-side of the platforms. (**Note:** Because of the expanding and contracting nature of plastics the stairs may be a tight fit and should be kept in a cool or shaded spot until ready to install.)

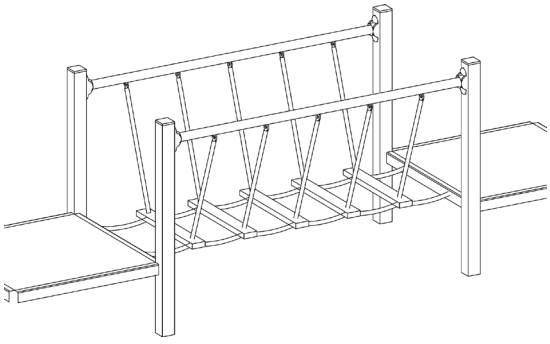
After ensuring that all bolts are tightened and that the platform and uprights are level and at the correct height, concrete the footings in place.

Step



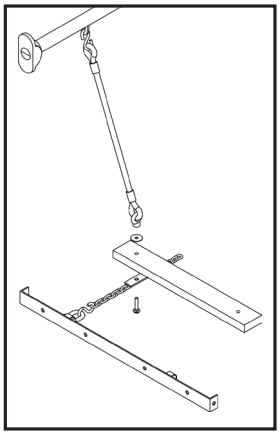
Attach two 'L' brackets to each upright using 'tap tight' tri-lobes. Rest the step on top of the 'L' brackets and fasten from underneath using 17mm tri-lobes.

Step Crossing



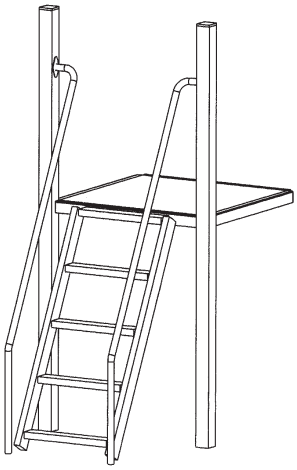
Using the handrails as a guide to determine the distance between uprights, dig holes for the uprights at the end of the handrails. (For exact distances see "Determining Distances between

Uprights" at the front of this manual.) Place the uprights in the holes and ensure that their depth is correct. Attach the flanges to the rails (as detailed in "flanges" on page 6 of this manual), then attach to the uprights using 20mm tri-lobes. Attach the platforms or end frame joiners to the uprights. After ensuring that the uprights are vertical, concrete them into the ground.

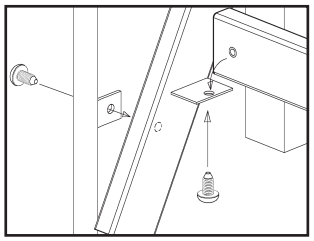


Attach the support brackets to each platform using 17mm tri-lobes at the sides into the uprights and onto the platform face with T-nuts. Connect the ropes, boards and support chains as shown using 50mm torx bolts entering the plates welded on the chain from underneath and a 3/8" washer between the eye-nut and the board. Apply 'loctite' to the thread of the eye-nut and tighten. Connect the top of each rope to the rails and the ends of the support chains to the platform brackets using 'S' hooks. (Ensure that the 'S' hooks are fully closed using vice-grips with the small end of the 'S' hook attaching to the chain and the large end connecting to the lug on the top rail and platform bracket.)

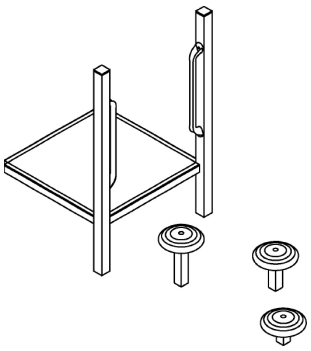
Step Ladder



Attach the flanges to the handrails (as detailed in "flanges" on page 6 of this manual), then using the handrails as a guide mark the position of the handrails on the ground and dig two holes. Loosely attach to the uprights using 20mm tri-lobes. Assemble the steps bolting the aluminium steps to the side rails using 17mm tri-lobes. Each side rail has a hole in the lower end for attaching the handrail. The top step has two holes in the back side for attaching to the platform. Attach the step ladder to the platform using 17mm tri-lobes entering from the underside of the platform into the holes in the back of the top step. Fasten the base of the handrails to the stairs. When all bolts have been tightened, concrete the handrails into the ground.



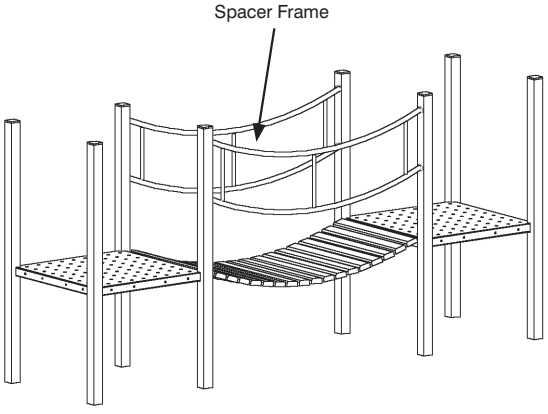
Steppers



Fasten steppers to the uprights using 17mm tri-lobes. Dig the holes for each stepper ensuring the holes are no more than 600mm apart at the centres. Install the posts on the steppers at various heights, ensuring they are vertical, then concrete into the ground.

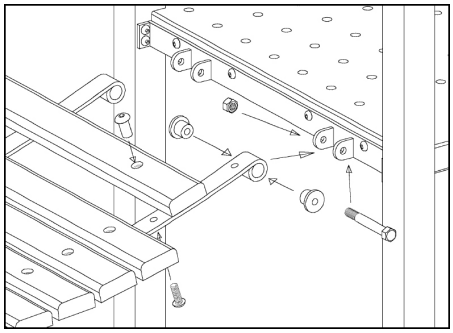
Suspension Bridge

Using the spacer frames (or hand rail panels) as a guide to determine the distance from one platform to the next. Dig holes for the uprights at the opposite end of the spacer frames and insert them at the correct height. Fasten the spacer frames to the uprights using 17mm tri-lobes. Attach the platform and uprights at the opposite end. After ensuring that the platform and uprights are level and at the correct height concrete the footings in place.

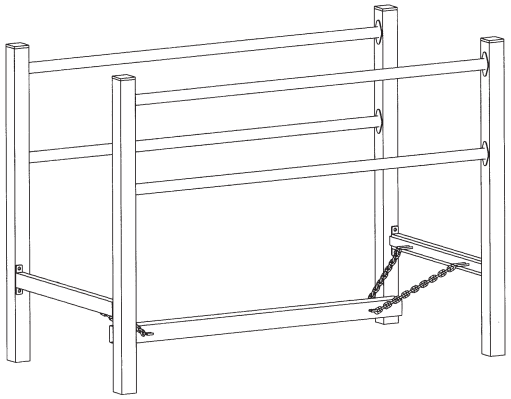


Attach the support brackets to the face of the platform using 17mm tri-lobes with 'T' nuts, and into the uprights using 20mm tri-lobes. Attach the support bars on one end to the platform by inserting hex head bolts through the nylon bushes as shown. Do not tighten the nyloc nut fully until the other end is secured. Attach the other ends of the support bars the same way, flexing the bars to fit into place. Tighten all bolts fully.

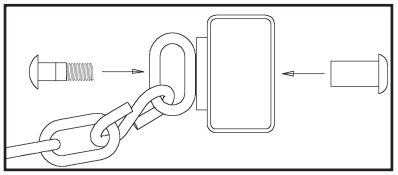
Once the support bars are in place attach the bridge boards to the top of the bars. The two boards with docked corners (in the case of timber) or the 2 shorter boards (in the case of aluminium) are positioned adjacent to the platforms. Timber boards are fastened using a cap nut through the top of the board and a 17mm tri-lobe through the underside of the support bar. Aluminium boards are fastened by a 20mm tri-lobe from the underside of the support bar. Before the bolts are inserted you should apply a small amount of 'loctite' to the thread. Make sure the boards are evenly spaced then tighten all bolts.



Swinging Balance Beam

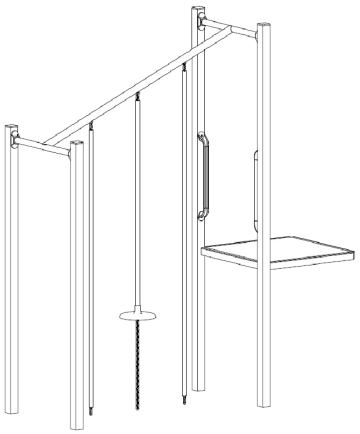


Using the handrails as a guide to determine the distance between uprights, dig holes for the uprights at the end of the handrails. (For exact distances see "Determining Distances between Uprights" at the front of this manual.) Place the uprights in the holes and ensure that their depth is correct. Attach the flanges to the rails (as detailed in "flanges" on page 6 of this manual), then attach to the uprights using 20mm tri-lobes. After ensuring that the uprights are vertical, concrete them into the ground. Connect the balance beam to the chains and the end brackets using 'S' hooks. Ensure the 'S' hooks are fully closed using vice-grips. Attach the brackets the platform using 17mm tri-lobes and T-nuts or to the end frame joiner using stainless steel cap nuts and 30mm cup head bolts.

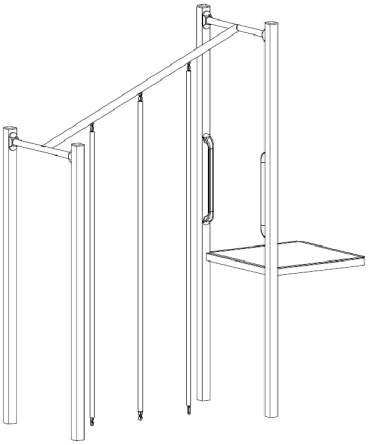


The balance beam without handrails is connected in the same fashion as above but the end frame should be installed so that there is a distance of 1815mm between upright faces.

Tarzan Climber / Jungle Climber

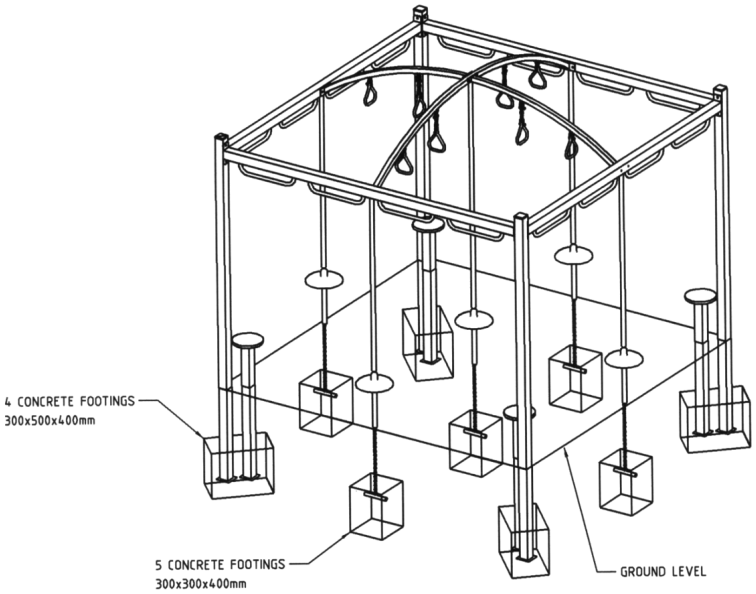


Position the top bar on the ground between uprights with one end level with the uprights it will connect to. You will need to raise the other end to the correct angle. (For exact distances see "Determining Distances between Uprights" at the front of this manual.) Mark the spot for the next two uprights. Dig the holes and insert the uprights to the correct height. Attach the platform and uprights at the opposite end.



Attach the suspended chains to the top bar and the chain anchors to the base of the chain using 'S' hooks. (Ensure that the 'S' hooks are fully closed using vice-grips, with the small end of the 'S' hook attaching to the chain and the large end connecting to the lug on the top rail). Attach the flanges to the top bar (as detailed in "flanges" on page 6 of this manual), then lift into place and attach to the uprights using 20mm tri-lobes. Dig a hole directly below each suspended chain and pommel. Allow the chains to hang into the holes, ensuring that they are taut. (If rubber surfacing is to be used, a pommel/chain anchor is supplied. The chain should be cut just above finished ground level and the anchor connected using an 'S' hook.) After ensuring that the bolts are tightened and the uprights vertical, concrete the uprights and the chain anchors into the ground. Dig other holes for the connecting platform as required and attach the platform. Attach the handgrips above the higher platform using 25mm tri-lobes.

Tarzan Maze

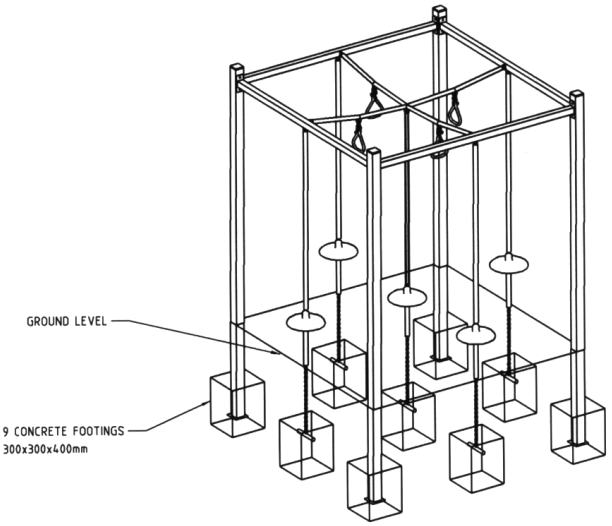


3 Metre Version

the four uprights, ensuring that they form a perfect square. After placing the uprights in the holes and ensuring that their depth is correct (with the top of the upright approximately 2.2m above the finished surface level), attach the side bars to the uprights using 17mm tri-lobes. Attach the longer arch bar to the opposing side bars and then the two half arch bars to the other sides and centre bar using 17mm tri-lobes. The five pommels on chains will hang from the outside of each arch bar and the centre where they connect (the centre chain being longer than the four outside chains). Dig five holes approximately 700mm deep below each of these attachment points. Allow the chains to hang into the holes, ensuring that they are taut. (If rubber surfacing is to be used, a pommel/chain anchor is supplied. The chain should be cut just above finished ground level and the anchor connected using an 'S' hook.) Ensure the chains are taut and vertical. Insert the steppers into the same holes as the uprights (as shown) with the top of the steppers approximately 400mm above the finished surface level. Ensure that all uprights and steppers are vertical and that the pommel chains are taut, and then concrete into the ground. The pommel chains each require footings of 300mm x 300mm x 400mm (deep) and the upright/stepper holes require footings of 300mm x 500mm x 400mm (deep).

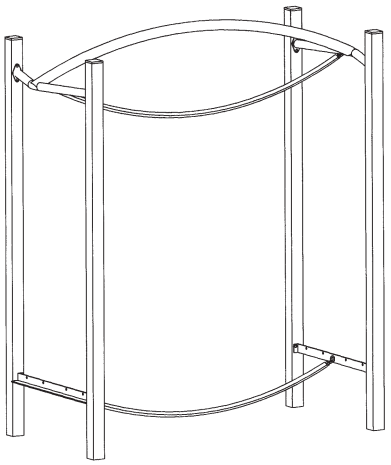
2 Metre Version

Install the uprights and side bars as described for the 3 metre version (above). Attach the top chains to the side bars using 'S' hooks. Attach the pommel chains to the side bars and the top chain (as shown) using 'S' hooks. Ensure that all 'S' hooks are fully closed using vice-grips, with the small end of the 'S' hook attaching to the chain and the large end connecting to the lug on the top rail. Dig holes for the pommels on chains as described above. Ensure that all uprights are vertical and that the pommel chains are taut, and then concrete into the ground.



Tight Rope Crossing

Position the top bar on the ground between uprights with one end level with the uprights it will connect to. Mark the spot for the next two uprights. Dig the holes and insert the uprights to the correct height. Attach the platform and uprights at the opposite end. Attach the flanges to the top bar (as detailed in "flanges" on page 6 of this manual), then lift into place and attach to the uprights using 20mm tri-lobes. After ensuring that the bolts are tightened and the uprights vertical concrete them into the ground.

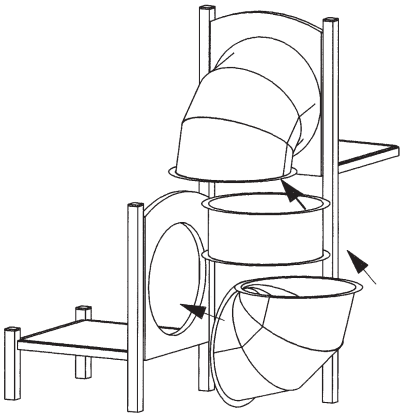


To connect the upper and lower chains, attach the brackets to each platform using 17mm tri-lobes and T-nuts. Attach the chains to the brackets using 8mm 'S' hooks. Ensure that the 'S' hooks are fully closed using vice-grips with the small end of the 'S' hook attaching to the chain and the large end connecting to the support bracket.

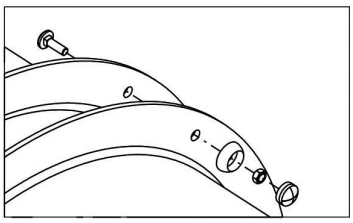
Tread Mill

Attach the flanges to the rung (as detailed in "flanges" on page 6 of this manual), then use the rung (which will sit below the finished ground level) to determine the position of both upright holes (870mm between upright faces). Dig the holes with a trench between them to allow for the rung and insert the uprights. Attach the rung to the uprights using flanges. Lift the tread mill into place and bolt into the uprights using 17mm tri-lobes. (The top of the tread mill should be approximately 400mm above the finished ground surface.) After ensuring that the bolts are tightened and the uprights vertical concrete the uprights into the ground. Attach the handgrips above the tread mill using 20mm tri-lobes.

Tube Climber



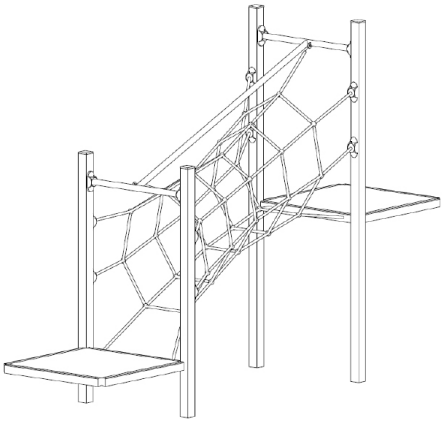
If the tube climber exits at 90o to the entry use the corner upright on the first platform as a guide and place the new platform in place on the ground to determine the hole position for new uprights. If the exit is in line with the entry, use another platform to determine the distance between the two platforms (the distance covered by the tube climber is the same as that taken by a platform). Dig the holes and insert the uprights to the correct height. Dig other holes for the connecting platform as required and attach the platform. Do not concrete until the tube climber is in place.



For tube climbers between platforms, attach both hole panels to the platforms as described under 'panels over (plastic)'. Attach the top and bottom sections of the tube climber to the hole panels using 50mm cup head bolts, nuts and security caps but do not fully tighten the bolts until all sections are in place. Once the top and bottom sections are in place, position the middle section (ensuring the rungs inside the tunnel have the right orientation) and connect the sections using 30mm cup head bolts, nuts and security caps as shown. After ensuring that all bolts are tightened and that the platform and uprights are level and at the correct height concrete the footings in place.

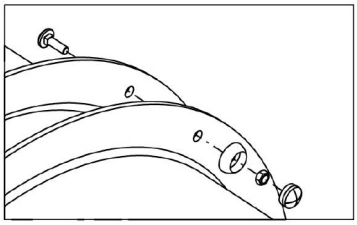
If the tube climber goes to ground attach the top panel to the platform. Connect the top section to the panel as described above, then join the middle and bottom sections. The support bracket will need to be attached to the inside face of the bottom section's lower flange using 40mm cup head bolts, nuts and security caps. Attach the slide legs to the support cradle using 'tap tight' tri-lobes. The bottom section will need to be supported in place until the support bracket is attached and concreted into the ground.

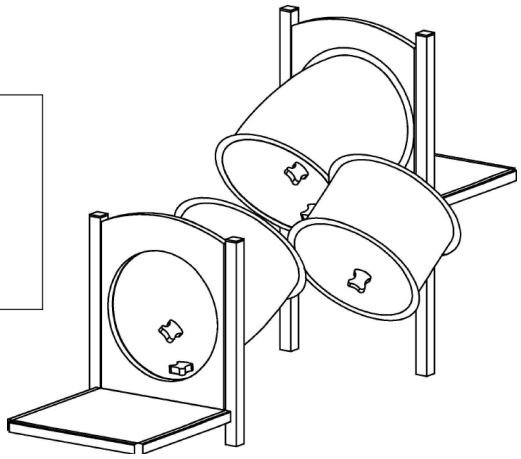
Tube Net



Use the Tube Net Rail to determine the distance between uprights. (For exact distances see "Determining Distances between Uprights" at the front of this manual.) Dig holes for the uprights. Place the uprights in the holes and ensure that their depth is correct. Attach the flanges to the tube net rail (as detailed in "flanges" on page 6 of this manual), then attach to the uprights using 20mm tri-lobes. After ensuring that the bolts are tightened and the uprights vertical, concrete them into the ground. Attach the Tube Net to the rail using 'S' hooks (ensuring that the 'S' hooks are fully closed using vice-grips, with the small end of the 'S' hook attaching to the chain and the large end connecting to the lug on the support rail) and to the uprights using 20mm tri-lobes. The plates supplied attach to the face of each platform, being fastened using 17mm tri-lobes and T-nuts through the middle 2 holes. The ropes then attach to the outer 2 holes in the platform face and support plate using 17mm tri-lobes. Apply a small amount of 'loctite' to all bolts before tightening.

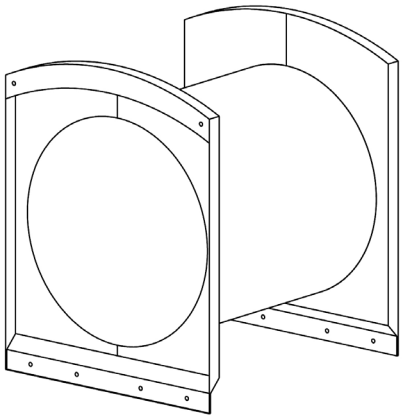
Tunnel Climber





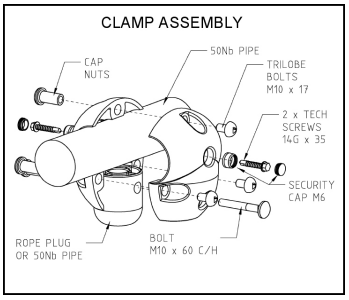
Ensure that both platforms connecting the Tunnel Climber have been installed. (For exact distances between platforms see "Determining Distances between Uprights" at the front of this manual.) Do not concrete the uprights in to the ground until the Tunnel Climber is in place.
Attach the three tube sections together as shown using 30mm cup head bolts, nuts and security caps as shown. Attach both hole panels to the platforms as described under 'panels over (plastic)'. Connect the tunnel sections to the hole panels using 50mm cup head bolts, nuts and security caps. After ensuring that all bolts are tightened and that the platform and uprights are level and at the correct height concrete the footings in place.

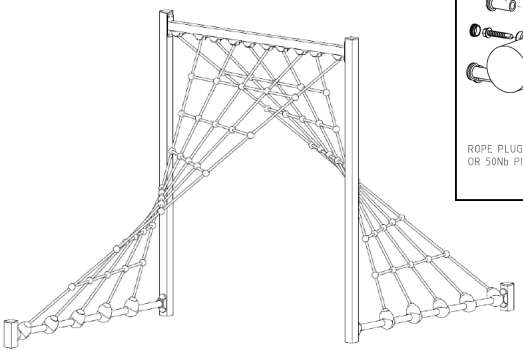
Tunnel



Place the tunnel on the ground level with the first platform and measure the correct distance for the next uprights. Mark the spot for the next two uprights. Dig the holes and insert the uprights to the correct height. Attach the platform and uprights at the opposite end. Fit the tunnel between the platforms and fasten the bottom of the tunnel to the platform using 17mm tri-lobes and T-nuts. The top of the tunnel is attached to the uprights using 'L brackets with 17mm tri-lobes and T-nuts on the tunnel and 17mm tri-lobes into the uprights. (Note: Curved tunnels are attached to a hole panel using 50mm cup head bolts, nuts and security caps as shown. The hole panels are attached to the platforms as described under 'panels'.) Tunnels 'under' are fastened at the bottom to a 'panel under support bracket' which attaches to the uprights using 17mm tri-lobes. After ensuring that all bolts are tightened and that the platform and uprights are level and at the correct height concrete the footings in place.

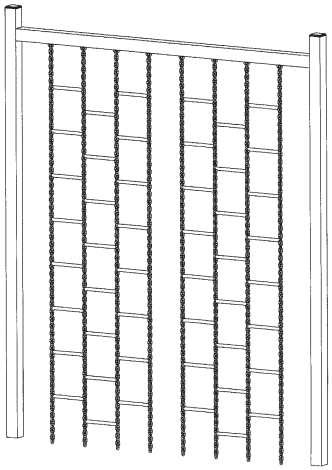
Twista





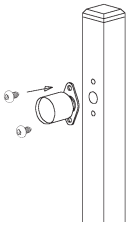
Use the bottom bars and the top bar to determine the distance between uprights. Dig holes for the uprights. Attach the flanges to the bottom bars (as detailed in "flanges" on page 6 of this manual). After placing the uprights in the holes and ensuring that their depth is correct, bolt the bottom bars in place using 20mm tri-lobes and top bar using 17mm tri-lobes (applying a small amount of 'loctite' to the thread before tightening). After ensuring that the bolts are tightened and the uprights vertical, concrete them into the ground. If the Twista is a free standing item the net should not be attached until the next day, allowing for the concrete to set. (If the Twista is part of a structure and the outside uprights are supported by other items the net could be attached on the same day.) Attach the top of each net to the top bar using 20mm tri-lobes (applying 'loctite'). Attach the clamps (that will be used to secure the ropes) to the bottom rails 17mm tri-lobes and cap nuts (applying 'loctite'). Fit the net by sliding the plugs on the ends of the ropes into the hole at the end of each clamp (see diagram) and securing in place using a 60mm cup head bold and a cap nut (applying 'loctite'). Tension the ropes as required by gently sliding the clamps slightly along the rails and then secure in place using a tech screw on both sides of each clamp into the rail.

Vertical Rung Climber and Vertical Wall Chain Net



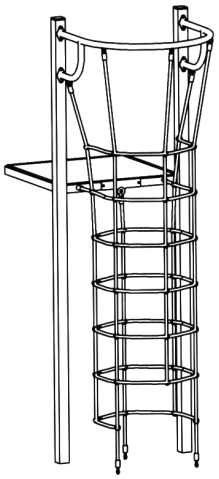
Use the top bar to determine the position of both upright holes. Dig the holes and insert the uprights, ensuring that the height at the top of the top bar is no greater than 2.5 metres from the finished ground surface. Attach the bracket at the top of the rung climber or chain net to the top bar using stainless steel cup head bolts and cap nuts (applying a small amount of 'loctite' to the thread before tightening). Lift the top bar into place and bolt into the uprights using 17mm tri-lobes. (If the item is free standing it may be easier to connect the top bar to the uprights prior to placing the uprights into the holes.) Dig a trench between the two uprights for the chain. Place the lower end of the rung climber or chain net into the trench, making sure the chains hang taut. After ensuring that the bolts are tightened and the uprights vertical concrete the uprights and the lower end of the rung climber into the ground.

Voice Pipe



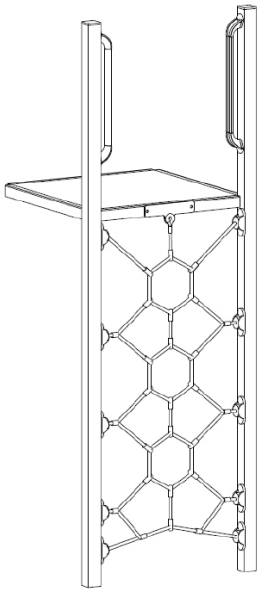
Voice Pipes are attached directly to the uprights using 17mm tri-lobes.

Web Tunnel



Attach the flanges to the web tunnel frame (as detailed in "flanges" on page 6 of this manual), then attach to the uprights using 20mm tri-lobes. Attach the web tunnel to the tunnel frame using 'S' hooks (ensure that the 'S' hooks are fully closed using vice-grips, with the small end of the 'S' hook attaching to the chain and the large end connecting to the lug on the frame). Attach the remaining vertical rope to the web wall plate using a counter-sunk bolt, then attach the web wall plate to the platform using 17mm tri-lobes and T-nuts (applying a small amount of 'loctite' to the thread before tightening). Attach both ends of the horizontal rope level with the platform to the outside holes on the platform using 17mm tri-loves. Attach the web tunnel anchors to the chains at the base of the ropes. Dig three holes below the web tunnel for the chain anchors. Ensure the ropes and chains are taut and concrete the anchors into the ground.

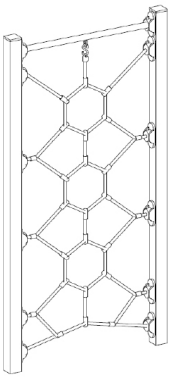
Web Wall



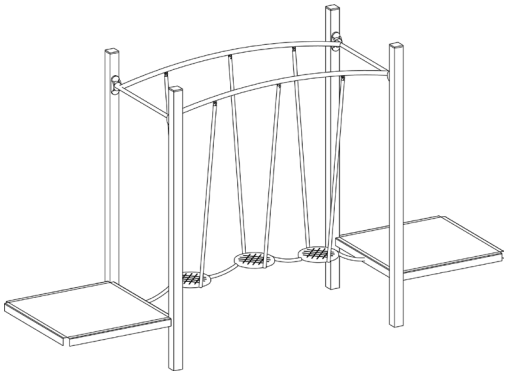
Below Platform
Attach the centre rope on the web wall to the web wall plate using a counter-sunk bolt, then attach the web wall plate to the platform using 17mm tri-lobes and T-nuts. Attach the web wall to the uprights using 20mm tri-lobes. (Apply a small amount of 'loctite' to all threads before tightening.) Once the web wall is secure, attach the handgrips above the platform using 20mm tri-lobes.

Free Standing
Determine the correct hole positions for the uprights by using the top rail or a platform as a measure. (The space between the uprights is 870mm or the same as the distance between uprights on a square platform.) Attach the flanges to the top rail (as detailed in "flanges" on page 6 of this manual). After placing the uprights in the holes connect the rail between the uprights using flanges (level with the top of the web wall). Ensure the depth is correct and concrete both uprights into the ground. Leave

the concrete sufficient time to firm before attaching the ropes. Once the concrete is set and the uprights are firm, attach the side ropes on the web wall to the uprights using 20mm tri-lobes. (Apply a small amount of 'loctite' to all threads before tightening.) Attach the top rope to the rail using an 'S' hook (ensure that the 'S' hook is fully closed using vice-grips, with the small end of the 'S' hook attaching to the chain and the large end connecting to the lug on the rail).



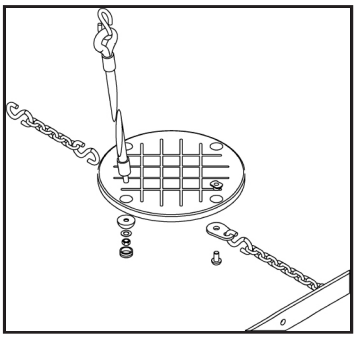
Wobble Walker



Position the top bar on the ground with the first end level with the uprights it will connect to. Mark the spot for the next two uprights, dig the holes and insert the uprights to the correct height. Attach the flanges to the top bar (as detailed in "flanges" on page 6 of this manual), then lift into place and attach to the uprights using 20mm tri-lobes. Ensure that the bolts are tightened, the uprights vertical and the top bar level.

Attach the adjoining platforms and then concrete the uprights into the ground.

Attach the support brackets to each platform using 17mm tri-lobes and T-nuts (with the T-nut on the underside of the platform.

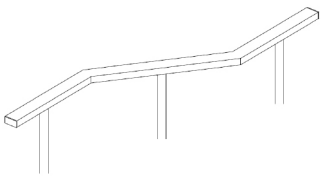


Connect the ropes to the top sides of each disc, fastening with a 3/8" washer, nut and security cap as shown. Attach each plate to the underside of both ends of each disc using a 25mm tri-lobe entering from underneath and a T-nut on the top. Apply loctite to the threads of all bolts before tightening.

Connect the ropes to the top bar and the chains to the discs using 'S' hooks. Ensure that the 'S' hooks are fully closed using vice-grips, with the small end of the 'S' hook attaching to the chain and the large end connecting to the lug on the top rail or disc.

Z Balance Beam

Attach the flanges to the legs (as detailed in "flanges" on page 6 of this manual), then attach to the balance beam using tap-tight tri-lobes.
Using the balance beam to determine the hole positions dig holes 700mm deep. Insert the legs into the holes and after ensuring the beam is level, concrete into the ground.



Before Leaving the Site

- ❑ Check that all bolts are tightened.
- ❑ Check that all concrete footings are 300mm below the finished surface level where loose-fill material is used.
- ❑ Check that the structure is solid with all uprights secure in the ground
- ❑ Check your softfall, ensuring that your fall zones and the depth of the softfall are correct.
- ❑ Touch up any scratches on the paintwork.
- ❑ Remove all rubbish and packaging from the site.

Safety and Maintenance Inspections

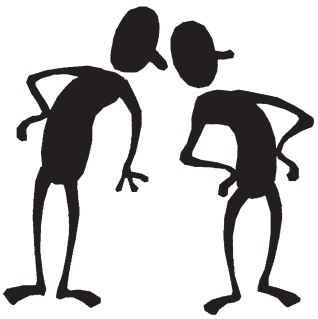
To ensure that your equipment remains in a safe condition, we recommend that you establish a schedule of safety and maintenance inspections and record the details of your inspections in a logbook. In this manner, any minor repairs are done as soon as they are required, and your equipment will remain in safe condition. In the event of an accident occurring on your play equipment, your records of these inspections are proof that your 'duty of care' has been maintained.

We recommend that your play equipment be inspected with varying degrees of detail on a frequency basis as outlined on the following page.

Any spare parts that may be required for your play equipment will be available through your local Forpark Australia branch, and our sales staff will be able to help you with any queries you may have regarding your equipment.

Please remember! Play equipment that is well maintained remains safe, and will last for many years.

ROUTINE VISUAL INSPECTION



Frequency – At least weekly. Daily inspections may be required where loose fill surfacing is used or in cases where the equipment is subject to heavy use or vandalism.

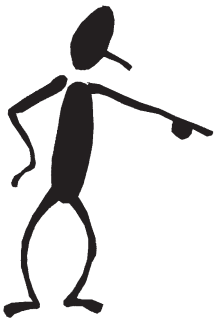
Surfacing

- ❑ Check that the soft-fall surfacing area is free of debris and contamination.
- ❑ Check that displacement of your loose fill surfacing material has not resulted in areas becoming shallower than the recommended depth, particularly below items of equipment where falls are likely. Such areas should be levelled or filled to ensure that the recommended depth is maintained.

Equipment

- ❑ Check for vandalism, and for any damaged or missing parts. In the event of any damage or missing parts, isolate the play equipment until repairs have been carried out.

OPERATIONAL INSPECTION



Frequency – Every one (1) to three (3) months, depending on the level of use. Equipment subject to heavy use or vandalism may need to be inspected more frequently. Any problems identified should be addressed on a priority basis taking into account any safety implications.

Surfacing and Surrounds

- ❑ Check that the soft-fall surfacing area is free of debris and contamination.
- ❑ Check that a loose fill soft-fall surfacing is at the recommended depth, and top up if necessary.
- ❑ Check that a synthetic surface is in good condition and securely in place to provide impact absorption.
- ❑ Check that any soft-fall surfacing borders are secure in the ground, do not constitute trip points, and have no rough or sharp edges.
- ❑ Check the area for overgrown bushes or hazards that may have intruded into the play area over time.

Equipment

- ❑ Check all fasteners and tighten and replace any that are missing.
- ❑ Check that all uprights and components are secure in the ground, and that no footings are showing through the soft-fall.
- ❑ Check steel play equipment for rust or corrosion. (All metal play equipment will show some signs of breakdown over time, and this may be exacerbated by a marine environment.) Replace any badly corroded parts.
- ❑ Check timber equipment for splintering and warping. Replace any damaged items.
- ❑ Check all moving parts for excessive wear, and replace any worn items.
- ❑ Check all chain links for wear and replace any damaged items.
- ❑ Check for any bending or cracking of steel components and replace where necessary.
- ❑ Check all paint-work, and touch up any areas that are worn or chipped.

COMPREHENSIVE INSPECTION

Frequency – Annually. On a yearly basis it is advisable to have your equipment checked by someone who is qualified in playground equipment maintenance, or by an engineer.

Surfacing and Equipment

- ❑ In addition to a detailed inspection of all areas covered in an "Operational Inspection", the following checks should be made.
- ❑ Check the structural integrity of equipment subject to corrosion or rotting.
- ❑ Check for any changes in the safety of the equipment resulting from repairs made, or added or replaced components.

Western Australia PO Box 484, Cloverdale 6985
Tel: (08) 9472 1788

South Australia PO Box 715, Modbury 5092
Tel: (08) 8283 3611

Victoria Unit 24/21 Eugene Tce, Ringwood 3134
Tel: (03) 9870 0233

New South Wales PO Box 5113, Greenwich 2065
Tel: (02) 9966 9945

Queensland PO Box 876, Capalaba 4157
Tel: (07) 3390 2188

North Queensland PO Box 4873, Cairns 4870
Tel: (07) 4033 5433

Northern Territory PO Box 715, Modbury 5092
Tel: (08) 8283 3611

Tasmania PO Box 1355 Rosny Park 7018
Tel: (03) 6248 5070

www.forparkaust.com.au

Helping Young Australians Grow